Seven international cases of water remunicipalisation

Edited by

Emanuele Lobina
e.lobina@gre.ac.uk
7th October 2019

A PSIRU Report commissioned by the City of Barcelona and Aqua Publica Europea,

the European association of public water operators (https://www.aquapublica.eu)

The Public Services International Research Unit (PSIRU) investigates the impact of privatisation and liberalisation on public services, with a specific focus on water, energy, waste management, health and social care sectors. Other research topics include the function and structure of public services, the strategies of multinational companies and influence of international finance institutions on public services. PSIRU is based in the Business Faculty, University of Greenwich, London, UK. Director: Prof. Sian Moore. Researchers: Prof. David Hall, Dr. Jane Lethbridge, Dr. Emanuele Lobina, Prof. Steve Thomas, Sandra Van Niekerk, Dr. Vera Weghmann.

Acknowledgments

For detailed comments and helpful suggestions, we are grateful to Milo Fiasconaro, Sian Moore, Alícia Ramos Jordan and Moisès Subirana Iborra.

The development of the analytical framework benefitted from conversations with Soren Becker, Daria Cibrario, Andrew Cumbers, Satoko Kishimoto and Mildred Warner. The development of the case study on Paris, France has benefitted from conversations with Daria Cibrario, Benjamin Gestin, Satoko Kishimoto and Anne Le Strat. The development of the case study on Berlin, Germany has benefitted from conversations with Dorothea Härlin, Christa Hecht and Christina Schaefer. The development of the case study on Atlanta, USA has benefitted from conversations with Mary Grant. The development of the case study on Budapest, Hungary has benefitted from conversations with Gabor Scheiring. The development of the case study on New York, USA has benefitted from conversations with Neil Gupta.

All errors are the responsibility of the editor.

Introduction

Remunicipalisation – or the return of water services to full public ownership, management, and democratic control following a period of privatisation – is an emerging trend in urban governance and its international diffusion has accelerated significantly since the turn of the century, particularly in Europe. Globally, the number of cases where local government has remunicipalised water services increased from two in two countries in March 2000 to 235 cases in 37 countries by March 2015. Two countries accounted for the majority of cases: France with 94 cases and the US with 58 cases.[1] The total number of cases has continued to grow since 2015,[2] and it is significant that local authorities in France – the country that has come to symbolise water privatisation - are remunicipalising water services at a faster pace than anywhere else. The evidence is that water remunicipalisation is here to stay as it has become an established policy option.[3]

Despite the growing trend of water remunicipalisation, pressures to adopt Public-Private Partnerships (PPPs) and other forms of privatisation remain unabated due to austerity and the seductive power exerted over local authorities by old and new promises of private sector efficiency, finance, and technological innovation.[4] However, decisions to remunicipalise are often made in response to the problems of private water management - from lack of infrastructure investments, to tariff hikes and environmental hazards.[5] Thus the emergence of the remunicipalisation trend offers an opportunity to reassess the public vs. private debate from a fresh perspective – laying bare the limitations and potential of both the public sector and the private sector in the delivery of essential public services. For these reasons, it should come to no surprise that water remunicipalisation is increasingly attracting policy and scholarly interest. The literature has devoted greater attention to the policy process of remunicipalisation – including the motivations of governmental decisions to remunicipalise,[6] social mobilisation and collective action as determinants of remuncipalisation,[7] and the policy diffusion of remunicipalisation[8] - than its policy outcome. Indeed, the impact of remunicipalisation on public service performance remains under-researched.[9] As a result, important questions remain unanswered regarding the extent to which remunicipalisation improves service quality, enhances investment, and fosters equality of access in comparison to private management. In other words, does remunicipalisation constitute progressive, emancipatory and sustainable change for water services and local communities?

To address the knowledge gap, this report provides a qualitative comparative analysis of seven prominent cases of water remunicipalisation in Europe and the USA. These cases are:

- Atlanta, USA (water supply);
- Barcelona, Spain (sanitation);
- Berlin, Germany (water supply and sanitation);
- Budapest, Hungary (water supply);
- Grenoble, France (water supply);
- New York, USA (sanitation); and,
- Paris, France (water supply).

Each case looks at the experience of water privatisation and subsequent remunicipalisation and the implications for sustainable water development. The objective is to identify similarities, differences and patterns across cases to produce knowledge and draw generalised conclusions on the relative merits of remunicipalisation as a policy option. The aim is to equip policy participants with evidence to inform decisions on remunicipalisation, at a time when privatisation is becoming increasingly controversial. The following section sets out key definitions and models of privatisation, the analytical framework and case study selection. Section 3 reviews the seven case studies. Section 4 discusses the findings of the report, which ends with concluding remarks and recommendations in section 5.

Analytical Framework

Assessing the comparative advantages of remunicipalisation and privatisation in terms of fostering sustainable water development or other policy goals of service provision involves three steps. Firstly differentiating between models of provision, secondly defining sustainable water development and other policy goals of service provision, and thirdly providing a basis for the evaluation of comparative advantage. We first develop the analytical framework around these three dimensions to understand how changes in governance may affect the more or less sustainable trajectories of urban water services. This framework supports an analysis of whether the governance of remunicipalised water services has better prospects of enhancing sustainable water development than the governance of privatised water services. The rationale for case study selection is then elaborated and the format of the case studies is indicated.

Models of provision

To differentiate between models of provision, the report first defines water privatisation and remunicipalisation. It then proceeds by differentiating between types of remunicipalisation in light of the degree of rupture or continuity with the practices of privatised operations.

Water privatisation vs. remunicipalisation

Water privatisation is defined as the transfer to private companies of the right to streams of income generated from water service provision. This definition – according to which water privatisation encompasses outright divestiture as well as concessions, lease contracts and other PPPs - is consistent with that adopted by the World Bank in an influential study and commonly used in the USA, the UK and elsewhere.[10] This definition is based on the transfer of rights to operational income irrespective of the extent to which the private sector owns shares in a water utility. It helps clarify that, as acknowledged by leading mainstream economists,[11] all private companies pursue profit maximisation as their raison d'être. Therefore, the notion of water privatisation includes a variety of arrangements for the delivery of water services. Under outright divestiture the private sector owns the infrastructure, has the responsibility to provide for all operating and capital expenditure, and holds the right to appropriate all net gains. Under concession contracts, the private sector does not own the infrastructure but has the responsibility to provide for all operating and capital expenditure and holds the right to appropriate all net gains. Under lease contracts, the private sector does not own the infrastructure, nor does it have the responsibility to provide capital expenditure, but has the responsibility to provide for all operating expenditure and holds the right to appropriate the corresponding net gains. Under management contracts, the private sector has the sole responsibility to manage the utility and is remunerated on a fix basis or in a form aimed at providing performance incentives. In addition, it is possible to find hybrids between these contractual arrangements.[12] Delegation has underpinned the French model of privatisation and had most international influence, whereas the UK has been home to the English model of water privatisation by divestiture.[13]

Water remunicipalisation has been defined as reverse privatisation.[14] In other words, remunicipalisation implies an end to privatisation and the return to full public ownership and control of a water utility, including its strategic and day-to-day management, subject to democratic governance. This means that the utility's decisions are ultimately subject to the approval and oversight of democratically elected representatives, complemented where applicable by participatory decision making.[15] Democratic governance can, however, be exercised in different ways. While corporate governance in private enterprise is dictated by the profit maximisation imperative, under public ownership there is no such imperative.[16] The behaviour of public enterprises may be influenced by

traditional public sector values like political accountability, regime stability, transparency and social cohesion or, conversely, by the pursuit of commercial objectives.[17] There is, therefore, a need to differentiate between different types of remunicipalisation.

Transformative vs. pragmatic remunicipalisation

The debate on the nature of remunicipalisation has identified two distinct categories of remunicipalisation. On the one hand, transformative remunicipalisation marks a clear rupture with the governance and practice of privatisation. By inverting the priorities of water service provision from the pursuit of private gain to that of collective development, transformative remunicipalisation becomes an emancipatory economic, political and social project aimed at subverting neoliberal models of urban governance.[18] On the other hand, pragmatic remunicipalisation shows a greater degree of continuity with the governance and practice of privatisation, once that exception is made for the change from private to public ownership. Despite the change in ownership, pragmatic remunicipalisation is marked by incremental adjustments of the governance and practice of water service provision. As a result, New Public Management practices like the commercial orientation of service providers are adapted to and continued under public ownership. By privileging the pragmatic concerns of contract management over aspirations for societal change, pragmatic remunicipalisation contributes to reproduce New Public Management regimes in local government.[19]

Policy goals of water service provision

Sustainable water development

To define sustainable water development, the report adapts the World Commission on Environment and Development's definition of sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[20] Sustainable water development can therefore be defined as development that enables the reproduction and viability of water services while fostering the flourishing of human communities, in the short as well as in the long term. A comprehensive understanding of sustainable water development requires identifying the interdependencies between multilevel factors including financial, economic, technical, social, environmental and political factors.

Financial viability is the capacity of a water utility to finance the required operating and capital expenditure, whether through tariffs or other means. Economic sustainability depends among other things on the ability of a water utility to provide consumers with publicly acceptable value for money and maintain whole asset value. Technical sustainability consists in the ability of a water utility to maintain, renew and expand infrastructure and to upgrade operational systems so as to deliver quality services in the long-term. This can, for example, be measured in terms of leakage or customer satisfaction. Social sustainability pertains to the ability of a water utility to ensure the reproduction and viability of water services while enhancing social cohesion and inclusivity and expanding access to affordable water and sewerage. Environmental sustainability requires that water services are delivered in a way that prevents or minimises harm to the environment. Political sustainability comprises the ability of a system of internal or external governance to underpin the political and societal consensus that supports the viable and sustainable reproduction of that governance system. As an example of the complex interdependencies between these factors, it is possible to observe that leakage reduction is not only instrumental to the maintenance of infrastructure, but also to the financial viability of a water utility and the reduction of its environmental impact.[21] Also, labour does at the same time constitute an important part of a water utility's operational costs, fulfils an essential role in the reproduction of organisational capabilities, contributes to the sustenance of communities, and is a policy participant through social dialogue and social mobilisation.[22]

The human right to water

Defined as the right of everyone to sufficient, safe, acceptable, accessible and affordable water for personal and domestic uses, the human right to water is underpinned by principles whose joint fulfilment is conducive to emancipatory outcomes: availability, quality and safety, cultural acceptability, accessibility, affordability, equality, non-discrimination, access to information and transparency, participation, accountability and sustainability. Also, states have obligations to use the maximum available resources for the progressive realisation of the right to water and to avoid retrogression in the enjoyment of the right.[23]

The realisation of the human right to water and the achievement of sustainable water development are therefore intertwined. While sustainability is one of the principles that underpin efforts to realise the human right to water, the realisation of this right is integral to the social component of sustainable water development as defined above.

Comparative advantage and institutional trajectories

The achievement of sustainable water development and the realisation of the human right to water involve assessing the comparative advantage of transformative remunicipalisation, pragmatic remunicipalisation and privatisation, as well as their respective governance. This comparative assessment must be premised on an evidence-based and sound methodological approach[24] rather than ideology. An example of a flawed assumption of the necessity and inevitability of policy change is the World Bank's pronouncement that 'there is no alternative' to water privatisation.[25] Each of the seven case studies reviewed in this report questions such an assumption. This report offers an in-depth analysis of the impact that different models of provision have on sustainable water development and the human right to water.[26] This impact translates into the trajectories of different governance systems, as these trajectories may support or undermine the achievement of the policy goals of water service provision.[27] In sum, our methodological approach to assessing the comparative advantages of remunicipalisation and privatisation in a range of settings is historical because based on the observation of real-world experience, rather than being ideological or abstract.

The seven international cases of remunicipalisation have been selected because of the opportunities they offer for policy learning. They either represent major cities in OECD countries that have experimented with different forms of water privatisation and/or cities that have remunicipalised for several years and therefore enable a longer-term assessment of the outcome of remunicipalisation, and/or cities that have experimented with unusual forms of privatisation. All cases allow for identifying the possible institutional trajectories of remunicipalisation and the factors that may influence the evolution of such trajectories. Each case study begins with a summary, followed by a brief technological and historical background to water service reform in the city. They go on to review the experience of privatisation, the rationale for the decision to remunicipalise, and the implementation process before detailing the outcomes of remunicipalisation and explaining how results were achieved and challenges overcome or otherwise met. In the discussion of findings lessons are drawn on the limitations and potentials of remunicipalised and privatised services in the pursuit of policy goals of water service provision. These lessons are identified through the comparative analysis of the case studies. This approach allows for the identification of policy implications relevant for the debate on whether and how to remunicipalise water services.

Seven international case studies

Transformative water remunicipalisation in Paris, France

Case study written by Emanuele Lobina

Case study summary

The remunicipalisation of water in Paris demonstrates the transformative power of public ownership when this is guided by political will to achieve progressive objectives. Remunicipalisation has radically changed water governance, prioritising the human right to water and sustainable development over profit maximisation. It has led to efficiency savings and reduced water tariffs, high investment levels, improved access to water, interventions for the environment, and strong democratic governance.

Introduction

The remunicipalisation of water supply on 1st January 2010 interrupted 25 years of private water management in Paris and gained symbolic power in the eyes of local authorities in France and beyond. Not only because Paris is the capital city of France, the homeland of the globally dominant model of water privatisation. But also because the two major water multinationals – Veolia and Suez – have their headquarters in Paris and their subsidiaries had supplied water to the city's dwellers until their contracts expired in December 2009 and were not renewed.[28] The effect of this symbolic event has been to accelerate the international diffusion of water remunicipalisation. The number of remunicipalisation cases in France has trebled in the five years following the remunicipalisation of Paris compared to the previous ten years (with 63 cases from 2010 to early 2015), and doubled in high-income countries compared to the previous five years (with 104 cases from 2010 to early 2015).[29]

If the achievements of Paris's new public water operator demonstrate the transformative potential of remunicipalisation, the rationale for the decision to end the city's experience with water privatisation is also of high relevance for decision makers. The reasons that induced the city of Paris to remunicipalise water supply include price hikes not justified by the investments made by private operators, lack of financial transparency under private management, difficulties in achieving sustainable development objectives through the renegotiation of private contracts, and the greater degree of public control and managerial flexibility that come with public ownership. These reasons are common determinants of water remunicipalisation across countries,[30] but they also reflect the experience of many more local governments that unsuccessfully attempt to renegotiate private contracts or remunicipalise water services.[31]

Technical and historical background

In the last two centuries, the reform process of Paris's water supply has been varied and complex. In the mid- 19th century, water supply was entrusted to an administrative department of the prefecture with the exception of billing which in 1860 was outsourced to Générale des Eaux (that would later become Veolia) with the award of a 50-year contract. This continued to be the case after the municipal government of Paris was established in 1975. In fact, a new 60-year contract for billing and metering was signed with Générale des Eaux in 1924 and it was only in 1981 that the management of water supply was handed over to an administrative department of the City of Paris. In 1984, when the contract with Générale des Eaux was due to expire, Gaullist mayor Jacques Chirac decided to privatise the entire water supply service.[32]

A number of explanations have been offered for the 1984 decision to privatise water. The City of Paris justified its decision in light of the investments required to reduce leakage after years of neglect.[33] This justification rested on the results of a technical study conducted by a private consultancy,[34] which found that the pipeline network was in poor conditions due to the public undertaking's decision to privilege the production of greater volumes of water over the maintenance of the network.[35] The situation was compounded by the fact that the income generated by the water service was used to fund the budget of the municipal government; another frequent reason for the privatisation of water in France.[36] Several observers have, however, pointed to the political and personal connections between Chirac and Lyonnaise des Eaux executive Jérôme Monod as a reason for the decision to privatise the city's water supply service.[37] Others have also argued that the decision was a response to a workers' strike.[38] This was not unusual at that time, as a number of French mayors decided to privatise water services as an anti-trade union measure.[39]

Experience with privatisation

Governance

The City of Paris awarded two 25-year lease contracts, starting from 1st January 1985, respectively to Générale des Eaux for the right bank of the river Seine and Lyonnaise des Eaux (which would then become Suez) for the left bank. The two companies agreed that Générale des Eaux would continue to provide billing and metering for the entire city, acting as a subcontractor for Lyonnaise des Eaux in the left bank. Bulk water supply (including the abstraction, treatment and transportation of water) was delegated to the public-private joint venture SAGEP with the award of a 25-year concession contract on 31st January 1987. SAGEP was 72% owned by the City of Paris, 14% owned by Générale des Eaux and 14% owned by Lyonnaise des Eaux. In addition to bulk water supply, SAGEP was responsible for controlling the two private water supply operators on behalf of the city council.[40]

The rationale for awarding two separate lease contracts was that of stimulating competition between the two private operators as their performance would thus be subject to a comparative evaluation.[41] However, the following limitations of the governance arrangements undermined that rationale. First, there was no competition for the market – the most diffuse form of competition in the water sector – because the two lease contracts were awarded without any call for tender.[42] Second, there was a lack of accountability due to the fact that the two private operators were – as a result of their joint ownership of SAGEP – at the same time regulator and regulated.[43] Third, the conflict of interest of the two private companies was compounded by the fact that their subsidiaries could take advantage of insider information when bidding for the works and supply contracts tendered by SAGEP.[44]

Price hikes

Over the lifetime of the two lease contracts, from 1985 to 2009, the price of water in Paris increased by 174%, excluding taxes, corresponding to an annual increase of 6.95%. Not only did such a price increase outstrip inflation. Also, it was not justified by the investments made in that period.[45]

Private profits

The lack of financial transparency and accountability and the excessive profits of the two private companies were criticised in a number of audits and reports. In a letter sent to the mayor of Paris in September 2000 the regional office of France's national audit body emphasised the lack of financial transparency characterising the Parisian operations of Générale des Eaux. The letter pointed to the opacity of the accounts which failed to disclose in full the financial results of water supply operations on the right bank of the river. In November 2002, the consultancy Service Public 2000 – which had been set up by the Association of French Mayors (AMF) and the French association of conceding authorities and public enterprises (FNCCR) to provide technical support to local authorities in the regulation of

private contractors[46] - found that the price charged by the two private operators in Paris was 25% to 30% higher than what was economically justified. In December 2003, a report by France's national audit body noted that there was a growing difference between the amount paid by consumers towards the constitution of provisions for infrastructure renewal – reserves aimed at guaranteeing the financing of renewal works – and the amount of works carried out for this purpose. While the effect of this practice was to inflate prices, the accounts of the two private operators grossly underestimated their profit margins. One mechanism used to underestimate the profits made by the two private operators was the subcontracting of works contracts to their own subsidiaries without calling for tenders. This practice enabled these subsidiaries to increase the remuneration of the respective mother companies, while the accounts of the two operators recorded a reduction in profits due to the costs of subcontracting.[47] The estimation of actual profits was made particularly difficult by the private companies' reluctance to provide accurate and complete financial data, despite repeated requests.[48]

Contractual renegotiation

The above revelations motivated the new Socialist mayor of Paris, Bertrand Delanoë, to renegotiate the contracts with the private companies to strengthen transparency and accountability. After months of negotiation, in December 2003 the responsibility to control the execution of the lease contracts and the procurement process was transferred from SAGEP to the City of Paris. For the first time since the award of the two lease contracts, an obligation was placed on the private companies to produce a maintenance plan and annual financial reports. The companies were also expected to pay duties for the occupation of public soil and the use of the pipeline network which had been previously paid by SAGEP and which would amount to €28 million for the remaining duration of the contracts. Despite these improvements, the two companies retained the right to subcontract works to their subsidiaries without having to call for tender – a practice which enabled them to inflate the price of works by up to 20%. Also, they could retain the renewal provisions that remained unspent at the end of the contract and treat them as profits, and this remained the case until French law changed in 2006. Finally, the accounts submitted by the companies would still follow the guidelines of the association of private service provider, thus falling short of the highest standards in terms of financial transparency. The upshot was that, although strengthened, the control of the municipal administration over the operations and finances of the lease contracts remained unsatisfactory.[49]

Remunicipalisation process

The decision to remunicipalise

The political decision to remunicipalise water supply was made after a long deliberative process. In 2006, there was an internal consultation with the management and staff of SAGEP. In parallel, SAGEP conducted a study on the end of the two lease contracts and of SAGEP's own concession. A comparative study was conducted on French and European experiences with the organisation of water services. Also, a two year long comparative analysis of the possible organisational arrangements was carried out, with an emphasis on the relative merits of two scenarios: a) public management of bulk water supply and private management of water distribution under a single lease contract; and b) public management of an integrated water supply system, bringing together bulk supply and distribution. The study showed that while the first scenario would imply a smoother transition followed by long-term difficulties with the regulation of the private operator, the second scenario would imply a more difficult transition followed by a less problematic principal-agent relationship in the long term. The results of the studies were also subject to consultation with the Parisian Water Observatory, a forum for public participation set up by the City of Paris. Comforted by the results of these studies and consultations, the mayor announced that – if re-elected in March 2008 – his administration would have remunicipalised water supply. The mayor was re-elected and in November 2008 the city council decided not to

renew the two lease contracts that were due to expire in December 2009, and to transfer the responsibilities for both bulk water supply and water distribution to a unique public water operator.[50]

The restructuring of the public-private concessionaire

In March 2007, the city council voted to instruct Veolia and Suez to sell their shares in SAGEP to the state-owned financial institution Caisse des Dépôts et Consignations, as a first step towards the remunicipalisation of bulk water supply. The sale of the private shares enabled the City of Paris to restructure SAGEP into a *régie à autonomie financière et personnalité morale*, an agency of the municipal government wholly-owned by the City and enjoying financial autonomy and distinct legal character. This form of public enterprise was chosen because it allowed for management flexibility together with public control and because it enabled the transfer of staff from the two private operators, which was governed by private law, to the new *régie*. On 1st January 2009, SAGEP was transformed into the new *régie* Eau de Paris which started to manage bulk water supply in June 2009. Also in 2009, the activities of the public laboratory for the control of water quality and for research and development CRECEP were transferred to Eau de Paris. On 1st January 2010, the day after the expiry of the two lease contracts, the staff of the two private water operators was transferred to Eau de Paris and this started to manage both bulk water supply and water distribution.[51]

Difficulties with the transition from private to public management

As predicted by the preparatory studies, the transition from private to public management proved difficult. In particular, there have been difficulties in three areas: the harmonisation of employment conditions for the former employees of the private operators; the incompatibility of IT systems for management, metering and billing; and, the passage from private to public accounting. After tense negotiations with trade unions, the harmonisation of pay and working conditions for all workers has led to a yearly salary increases of 1.5% to 2.5% over and above the 2% increase indicated in the service contract with the City. On the other hand, not all the employees of the two private operators were transferred to the new *régie* on 1st January 2010, leading to a loss of local knowledge particularly on the operation of IT systems. Other transitional difficulties included the incompatibility of IT systems used by the two private operators for management, metering and billing, which could only be operated by the two private operators and which forced Eau de Paris to outsource these ancillary services to Veolia and Suez in order to ensure service continuity. Finally, the need to familiarise with a new public accounting system has led to delays in the payment of suppliers that have resulted in penalties until 2014. In 2017, a report of France's Regional Court of Auditors observed that Eau de Paris had managed to overcome all transitional difficulties.[52]

Remunicipalisation outcomes

Governance

The regulatory relationship between the City of Paris and Eau de Paris is governed by a 6-year service contract that sets objectives inspired by the principles of the human right to water and sustainable development. These objectives include guaranteeing access to water, ensuring efficient and effective operations, and investing for the long-term development of the water system.[53] Transparency, accountability and public participation in decision-making have been considerably strengthened compared to private governance arrangements in place until 2009. As of February 2019, the Board of Directors of Eau de Paris was composed of 18 members entitled to vote – of which, 13 city councillors, two workers' representatives, and three civil society representatives. In addition, two experts sat as observers or consultative members of the Board of Directors.[54] Another participatory mechanism is represented by the Parisian Water Observatory, a forum open to all stakeholders that aims to serve as a critical friend to the City and Eau de Paris in relation to the formulation and implementation of water policy.[55] In June 2017, on occasion of Public Services day, Eau de Paris was awarded the United

Nations Public Service Award. This award, which aims at rewarding excellence in the public sector, was given in recognition of Eau de Paris's "efforts to promote transparency, accountability and integrity in public service".[56]

Efficiency savings

In the first year of operations the new public municipal operator Eau de Paris made efficiency savings of €35 million, which enabled the public enterprise to reduce tariffs by 8% in July 2011. These efficiency savings were made despite the transitional difficulties experienced by the new *régie* and thanks to a number of factors that distinguish public from private operations: a) the fact that public enterprises are not subject to paying corporate tax; b) the fact that Eau de Paris does not pay dividends to shareholders and that all profits made by Eau de Paris are reinvested in the development of the system; c) the fact that Eau de Paris is subject to public procurement rules and that competitive tenders are called for all works and supply contracts; and, d) the rationalisation and economies of scale and scope that come with the integration of bulk water supply and water distribution services.[57] In the following years, there have been minor adjustments in the price of water so that the overall price reduction from 2010 to 2017 has been of 2.6%.[58] This is not insignificant, considering that the transaction costs of remunicipalisation exceeded €30 million[59] and that, due to decreasing water consumption, the sales of Eau de Paris have fallen by 10.4% in the period 2010-2015.[60] Indeed, this 2.6 price reduction from 2010 to 2017 under public management contrasts with a 174% tariff increase under private operation from 1985 to 2009.[61]

Self-financing

Eau de Paris enjoys a low level of indebtedness and a high level of self-financing, that is the capacity to finance investments using the revenues of the enterprise. If Eau de Paris' total indebtedness amounted to €77 million in 2011, this had decreased to €66 million in 2015.[62] In 2018, Eau de Paris was in a position to extinguish all its debts in less than one year, much faster than its own objective of less than 7 years. The average self-financing ratio for the period 2017-2018 was around 100%, which is an indicator of strong financial sustainability.[63]

Investment levels

The operational performance of Eau de Paris initially suffered because of the difficulties experienced with the transition from private to public management,[64] notably due to a 30% increase in operating costs between 2010 and 2015.[65] Once these difficulties were overcome, Eau de Paris managed to achieve high investment levels that kept increasing throughout the years. From 2010 to 2017, Eau de Paris invested an aggregate €543.28 million for a yearly average of €67.91 million[66]. From 2015 to 2018, the yearly average of investments carried out by Eau de Paris was even higher, at €76.8 million.[67]

Infrastructure renewal

Eau de Paris has continuously improved its performance in terms of infrastructure renewal, an area of performance which is important for the sustainable development of ageing water systems like that of Paris. While in 2010 the rate of water pipeline renewal was 0.13%, this indicator grew to 0.85% in 2018,[68] which is in line with the highest international standards.[69]

Leakage

Due to a number of reasons – which include the ageing and thus inaccuracy of many meters, as well as the interruption in 2014 of interventions to detect leakage, due to the discovery of asbestos in the pipes – leakage ratios have fluctuated from around 8% between 2010 and 2013 to around 10% between 2015 and 2018. The introduction of acoustic sensing techniques in late 2017 has enabled to significantly increase the number of leaks detected.[70] The introduction of meter renewal programme

in 2019 is expected to improve leakage ratios further.[71] These figures require some context. First, Eau de Paris has adopted a more stringent method for calculating leaks since beginning operations, so that the comparison of leakage with the previous private operations has been complicated.[72] Second, a leakage ratio of 10% is very good by international standards[73] and, for example, amounts to half the national average in both France and England.[74]

Customer services

In July 2011, Eau de Paris in-sourced customers services launching a range of free services offering real-time information to consumers, including alerts on leaks and over-consumption. These services are, together with a single entry-point online centre for answering customers' queries, behind a high customer satisfaction rate ranging between 96% and 90% in the period 2012-2018, and the award to Eau de Paris of the Best Customer Service of the Year prize for 7 consecutive years.[75]

Access to water

Eau de Paris has made important interventions to improve access to water. In 2010, it has increased its contribution to the Housing Solidarity Fund – a fund aimed at supporting vulnerable consumers in difficulty with the payment of water bills – to €250,000 (the aggregate annual contribution previously made by the two private water operators was €175,000). Eau de Paris then doubled its contribution to €500,000 and kept donating the same amount since then.[76] In 2012, it established a new fund aimed at helping individual customers. Its policy forbids disconnecting consumers for non-payment, even in squats. It has improved on-street access to water by operating a network of free-access fountains and providing homeless people with water by distributing flasks and jerrycans along with maps of water access points.[77] In an effort to facilitate the access to water for all, including the homeless, Eau de Paris has helped the City of Paris to increase the number of free-access fountains available to the public from 127 in 2010 to 196 in 2018, of which 87 kept functioning in sub-zero temperatures. The construction of these fountains is financed by the municipal government and Eau de Paris is responsible for their operation and maintenance, which is financed through tariffs. The decision to construct the new fountains has been made as part of the city's participatory budgeting. Since January 2018, the City of Paris has given Eau de Paris the responsibility to operate and manage 919 free-access water fountains in the city's parks and green areas.[78]

Interventions for the environment

Eau de Paris has undertaken a program of acquisition of agricultural land to prevent the use of pesticides and other substances that may pollute groundwater. Since 2010, this activity has intensified compared to the practice of SAGEP under mixed ownership. Eau de Paris also enters into partnerships with farmers to ensure that their lands are devoted to pasture or that they use sustainable growing practices. These interventions have a positive environmental impact and reduce the cost of treating water.[79]

In 2016, Eau de Paris achieved a 12% reduction in the consumption of electricity and a 15% reduction in greenhouse gas emissions relative to 2004. Also in 2016, 95% of the electricity it consumed was of renewable origin. Finally, Eau de Paris set up a geothermal power plant that uses groundwater heat to produce 75% of the energy needed by a Parisian district.[80]

Sustainability

Water remunicipalisation in Paris has fostered sustainable water development at the financial, economic, technical, political, social and environmental levels. It has produced transformative results at various levels thanks to a policy that has placed the interests of consumers, the environment and the local community before technical and commercial considerations.

Financial sustainability

Remunicipalisation has enabled Eau de Paris to enjoy low indebtedness and high self-financing ratios, and to achieve high investment levels.

Economic sustainability

Eau de Paris has increased efficiency and reduced prices, inverting the 25-year trend of above inflation price increases under private management.

Technical sustainability

Despite transitional difficulties with the integration of IT systems, Eau de Paris has achieved levels of excellence for customer satisfaction, low leakage levels and a high rate of pipeline renewal.

Political sustainability

Eau de Paris's strong democratic governance and a variety of mechanisms promoting transparency, accountability and integrity, have attracted international recognition.

Social sustainability

Inspired by the principle of the human right to water, Eau de Paris has multiplied efforts to guarantee access to water compared to those of the preceding private operators. Eau de Paris' efforts include the reduction of prices, payment of subsidies to a solidarity fund, and operation of a growing network of public fountains.

Environmental sustainability

Inspired by the principle of sustainable development, Eau de Paris has intensified efforts to prevent groundwater pollution and reduce the need for water treatment. It has also produced important efforts to reduce greenhouse gas emissions in the city of Paris.

Pragmatic remunicipalisation in Berlin, Germany

Case study written by Vera Weghmann, Emanuele Lobina and Katrin Nicke

Case study summary

The case of Berlin shows that remunicipalisation is not always transformative. However, even moderate change in governance can lead to progress towards the realisation of the human right to water and enhancement of sustainable water development, compared to what is the case under privatisation. Remunicipalisation in Berlin has facilitated the implementation of price cuts imposed by a federal regulator and supported the City's decision to enhance the realisation of the human right to water, although investment levels remain similar to those under privatisation.

Introduction

Reunification costs were stretching Berlin's budget in the 1990s. In line with the neoliberal consensus of the time, privatisation was the quick and easy answer for both financial recovery and the provision of restructured public services within financial constraints. After privatising other public services Berlin began the process to privatise its water services in the mid-1990s.[81]

On the 29th of October 1999 Berlin signed 30-year contracts for the privatisation of Berliner Wasser Betriebe (BWB), Berlin's water and sewage utility, with RWE and Vivendi (now Veolia) also buying 49.9% of BWB for €1.8 billion and receiving a share of 24.95% each.[82] The privatisation turned out to be highly controversial. The explosion of water prices after 2004 from 2003 to 2006 led to public resistance, which eventually led to the remunicipalisation of Berlin's water services in 2013.

Technical and historical background

Preparations for the privatization of BWB began with its commercialisation in 1994 when the Senate of the city-state of Berlin decided to restructure the public company.[83] This was done in order to help pay off the city's debts and turn the BWB into a profit making company by operating international contracts,[84] for example buying shares of Budapest Sewage Works in 1997 (see case study on Budapest). This process was facilitated by the "Berliner Betriebegesetz" that, adopted in 1994, promoted greater independence in the management of public enterprises through a reduction in political influence and control. The BWB developed a broad portfolio with more than 20 partnerships, many of which proved to be unprofitable and represented expensive, unsuccessful investments for the BWB and thus also for its guarantor the city of Berlin. Yet even though the failures became obvious, Berlin's government did not interfere, for instance, by reducing BWB's operations back to its core business and generating a moderate revenue for Berlin's budget.[85] Further, the senate decided to privatise the BWB by selling part of its capital to the private sector. Following the full privatizations of its energy companies (Bewag and Gasag) in 1997 and 1998, the BWB was the only public entity left that could be privatised to meet budget deficits. This decision was presented as 'a necessity in the face of rising city debts' and as an opportunity to make BWB an important commercial player in the global water market.[86] Most political parties in the Senate accepted the privatisation of the BWB as inevitable.[87] In 1999 the consortium Vivendi/RWE/Allianz were awarded to take over 49.9% of the shares of BWB. The purchase price amounted to 3.1 billion Deutsche Mark (approximately 1.7 billion Euro) and was the highest offer. The contract validity was 30 years.[88]

Trade unions and labour

The workers of Berlin's waterworks, Berliner Wasser Betriebe (BWB), with the support of their trade union, the Public Services Union (ÖTV), which later merged and was renamed ver.di, contested the water privatisation plans. First the union proposed an alternative solution that would fulfil the senate's

expectation to generate DM 2 billion (€ 1.06 billion) in revenues. The union proposal was very quickly rejected by the Senate, probably the most visible sign that the Senate's goal had always been BWB privatization in itself, not generation of funds to balance the city budget (the official narrative). The ÖTV then demanded that in case of privatization, management control had to remain independent of external (non-Berlin) water utilities, but this was also rejected.[89] However, union resistance led to a strong collective agreement, which meant that the pay and working conditions remained the same after the privatisation and the employees had their employment guaranteed until 2014, in other words no involuntary redundancies could be made.[90] Unlike other cases of privatisation the BWB did not hire new employees on different contracts when employees left voluntarily or retired leading to a two tier workforce[91]

Experience with privatisation

Governance

The contract - called the consortium agreement - between the private companies and Berlin, was a key governance mechanism in the privatised BWB. The consortium agreement outlined a) the shared aims of the contract partners b) the business structure c) the appointment of management, d) the objectives of the cooperation and arrangements for interruptions, placement of the stock, contract questions of guarantee, merger control and implementation. All other contracts and agreements were annexes to the consortium agreement.[92] The consortium agreement also agreed that: i) within 10 years 2.5 billion Euro, equivalent to about 250 million Euro per year, must be used for investment;[93] ii) the tariffs would remain stable until 2003; and, iii) enforced redundancies were excluded until 2014. Significantly the consortium agreement included a guaranteed return on equity for the private companies. This varied on a yearly basis, as it amounted to the sum of the average of German government bond yields and a premium of 2%, and in some years totalled around 8%.[94] If the tariffs could not be increased by the Senate, the profits for the investors were guaranteed by the State budget.[95] Most notably for transparency, the contracts remained confidential and were not available to the public.[96] Not even the Parliament was able to view the full contract.[97]

Price hikes

The BWB financed itself exclusively from tariffs.[98] As mentioned above the consortium agreement meant that until 2003 it was agreed that water charges to the consumer tariffs would remain stable. However, immediately after 2003 the tariffs increased drastically. Between 2003 and 2006 alone water prices rose by nearly 24%.[99]

Private profits

The private investors made good business in Berlin. Between 2001 and 2011 the private shareholders received a profit transfer at a total of 1,142.6 million Euro. This means that just within 10 years they recovered 67.21% of the capital they used to buy their shares in 1999 (which was about 1.7billion Euro). At the same time the city of Berlin received only 778.1 million Euro because Berlin has renounced about 365 million Euro of the profits it was entitled to receive during this period.[100] The unequal distribution of dividends between the private and public shareholders was due to the fact that in 1999 the Berlin Constitutional Court had ruled that the formula for the calculation of return on equity was unconstitutional, effectively lowering the return on equity. Because the City of Berlin was contractually committed to guarantee the remuneration of the private shareholders, it agreed to waive its claim to part of 50.1% of profits to compensate the private shareholders for the loss suffered as a result of the 1999 ruling. In 2003, a new tariff formula was introduced which resulted in consistent price increases, thus explaining the explosion of tariffs from 2003 to 2006.[101]

Remunicipalisation process

Regulatory initiatives

The drastic rise in water charges led to political opposition as well as a more pragmatic recognition of policy and regulatory failure. Consequently, re-regulation efforts were made. In 2006 new rules for the Berliner Betriebegesetz (the Berlin company law) were agreed that would increase governmental and parliamentary oversight of public companies.[102] A year later, in 2007, an amendment of the freedom of information act and a court decision of the Higher Administrative Court Berlin-Brandenburg (OVG), ruled that the general basis of the calculation of the water and wastewater disposal tariffs had to be publicly available. [103] These new regulations can be seen as the first challenge to the confidential arrangements that guaranteed the profits of the private companies and underpinned higher prices.

Social mobilisation

The rising water prices and the opaque contracts with the private providers caused public anger and the privatization of water became a topical issue in Berlin. In that context, the anti-privatization movement Attac initiated a campaign for the remunicipalisation of water. In May 2006, the Berliner Wassertisch (water table) was launched, a grass roots campaign to take Berlin's water back under public ownership. Interestingly rather than demanding direct remunicipalisation it first demanded transparency.

The initial demands of the Wassertisch was that the confidential contracts of the privatisation deal would be made public and there would be clarity on how the water tariffs were calculated and how much profits the private companies, REW and Veolia, were making from the water services in Berlin. The campaign mobilised a petition (Volksbegehren) demanding full transparency on the consortium agreement. According to German law if a Volksbegehren has collected the signatures of 7% of those eligible to vote within four months, the city is obliged to hold a referendum (Volksentscheid).[104] Within a few months 660,000 signatures were collected, well above the 170,000 needed to hold a referendum. One strategy of the Wassertisch was to use existing local community networks to recruit "signature collectors", which produced the large number of signatures swiftly, but also raised public consciousness about the failure of privatized water[105]. The city of Berlin initiated a court case to preempt the Volksbegehren by arguing that the companies had a right to commercial confidentiality and that this had priority over the right of Berlin's citizens to be informed. However, the Senate lost the court case and the Volksbegeheren was successful.

In the run up to the referendum, October 2010, the left-wing Berlin newspaper, die Tageszeitung, published the confidential contracts.[106] The referendum was held in February 2011 and 98.2% voted in favour of the proposition "Berliners want their water back". Although, technically, the focus of the referendum was on ensuring the legal disclosure of all contracts, the Wassertisch had associated the referendum campaign with demands for the remunicipalisation of water services.[107] The turn-out was 27. 5% so just above the 25% needed to make the referendum valid. In total 666,235 Berliners voted for transparency and remunicipalisation - the first successful referendum in Berlin.[108]

Corporate resistance

In response to the referendum, Veolia and RWE filed a lawsuit in the constitutional court against the publication of the contract that had been required by the referendum. [109] However only a few months later RWE decided to withdraw from the water market to concentrate on energy and sold its shares in BWB in May 2012 to Berlin. In response, Veolia took RWE to court to prevent it from selling its shares to Berlin. [110] However, this was rejected by the provincial court in Berlin (Landgericht Berlin) [111] and consequently Veolia started to negotiate with Berlin over remunicipalisation.

The transaction costs of remunicipalisation

In 2012 Berlin brought back RWE's 24.95% shares of the BWB, for €618 million. In December 2013 it brought back Veolia's 24.95% for €590 million. The acquisition took effect retroactively from January 2013. Through acquiring Veolia's shares the BWB became 100% publicly owned;[112] the total cost of remunicipalisation was €1.208 billion. The buy-backs are financed by a 30-year loan that will have to be repaid by water consumers.[113] It should be noted, however, that these transaction costs of remunicipalisation should be primarily attributed to the 1999 privatisation.[114] This is a helpful reminder that it is better not to privatise in the first place than having to remunicipalise in the (near) future, as so often happens.[115]

Remunicipalisation outcomes

Governance

The Berlin Senate has continued to manage the remunicipalised BWB as a profit-oriented holding. For example, it has rejected the Berliner Wassertisch's calls for introducing advanced forms of public participation and, instead, established a consultative consumer council much in line with the practice of private water operators whose preferred form of public participation is mere consultation.[116] The Berliner Wassertisch opposed all this and launched a new demand "first remunicipalization - then democratization!" and drafted a "Berlin Water Charter" with concrete proposals for a transparent, socially fair and environmentally sustainable BWB in open consultation with Berlin's population.[117]

Nonetheless, the passage to full public ownership has removed the profit maximisation imperative that is characteristic of Public-Private Partnerships and other forms of privatisation. This has enabled BWB to reduce its rate of return to 5.1% as a way of financing the price cuts imposed by the Federal Cartel Office (see section below). By removing the profit maximisation imperative, remunicipalisation has also created the governance conditions for a less confrontational approach with the Federal Cartel Office, thus facilitating the reduction in prices. The significance of this approach to profit and price reduction should not be underestimated as multinational companies like Veolia have proved capable of resisting regulatory pressure, not only in developing but also in developed countries. More precisely, multinationals have often influenced local decision making processes by taking court cases or threatening litigation to obtain multimillion compensation. They have also taken extra-legal initiatives such as suspending the payment of concession fees and, in one case, even temporarily suspending service provision to exert pressure on local authorities. The result of these initiatives has often been to reverse regulatory decisions that negatively affected their commercial interests.[118]

On the 22nd of March 2018, under the initiative of the Berliner Wassertisch, Berlin joined other cities across the world in becoming a 'Blue Community' following the introduction of the Canadian Blue Community project through the city's Senate. [119] The declaration recognises water as a human right, pledges to keep the water services in public ownership and promotes the drinking of tap water over bottled water. Becoming a blue community Berlin signalled support for the international movement for public water ownership.[120] It also led to the launch of a public investment programme for the construction of drinking water fountains to expand access to water. It remains to be seen, however, whether this development will lead to more transformative changes in governance.

Regulation and efficiency savings

Prior to the referendum and before the remunicipalisation the left-wing Senator Harald Wolf (Die Linke) called on the Bundeskartellamt (Germany's Federal Cartel Office) in March 2010 to investigate Berlin's water prices. He did this as the public concern for the rising water prices became more pressing. Harald Wolf's initiative to get the cartel authorities involved reveals a lot about the

institutional set up of the BWB. Despite sitting on the board of managers that controlled the BWB Harald Wolf had no say in setting prices. When, in March 2011 the Federal Cartel Office suggested a price reduction of 16% the BWB appealed against the decision. However, the prospect of price reductions enforced by the cartel office made Berlin's water sector much less attractive to private companies. The prospect of reduced profitability combined with the public pressure damaging the companies' image is likely to have motivated RWE's decision to sell its shares back to BWB. As mentioned above, Veolia was far less keen to sell and even unsuccessfully took RWE to court to prevent Berlin's acquisition of RWE's shares.

Eventually, after the remunicipalisation, the cartel office and Berlin reached a settlement that tackled the excessive water prices. As a result, BWB had to reduce water prices by an average of 17% from 2012. The price reduction corresponded to savings of more than €440 million for Berlin water users in the period between 2012 and 2018, as compared to 2011, demonstrating the extent to which water prices had been inflated by the privatised utility. In its investigations, the Federal Cartel Office compared water prices in Berlin with those in Hamburg, Munich and Cologne – where water is supplied by utilities operating under similar technical conditions to those in Berlin – and found that there was no justification for the high prices in Berlin.[121]

Investment

While agreed investment of 2.5 billion within 10 years was pledged during the part-privatisation, it has been argued that this was significantly less than necessary. By the time of the remunicipalisation Berlin's water network suffered from 'severe under-investment'; the BWB estimated that 23% of the sewerage system was in need of rehabilitation measures, although at that point it had assessed only over half of the system.[122] Consequently, the BWB committed to double the investment needed for the rehabilitation measures to €94 Million annually in the period from 2013-2020 – prior to remunicipalisation, only €47 Million had been spend on maintenance.[123] However, there seems to be little improvement when comparing the amounts actually invested in the 5 years after remunicipalisation (2013-2017) with the investments made in the 5 years prior to remunicipalisation (2008-2012).[124]

Access to water

In May 2018, after becoming a "Blue Community", the City of Berlin entered into an agreement with BWB for the installation of 100 free-access drinking water wells and water dispensers in 2018-2019, which the City was to finance to the tune of €1 million.[125] It remains to be seen whether the City's decision to become a "Blue Community" will lead to the prioritisation of expanding access to water over the commercial objectives of the publicly-owned BWB.

Employment

For the BWB's workers the strong collective agreement they achieved through their struggle in the 1990s remained valid. However, while there had been no redundancies under privatisation workers leaving had not been replaced. This led to a decrease of employment levels of nearly 35%, from 6012 workers in 1999 to 4475 in 2010 (in full time equivalents).[126] Following remunicipalisation, workers were reported to feel more secure in their jobs.[127]

Sustainability

In the case of Berlin, remunicipalisation has fostered sustainable water development at the economic, political and social levels. There is however continuity with the privatisation era, for example in the areas of financial and technical sustainability.

Financial sustainability

Remunicipalisation has brought little change in terms of financial sustainability as the high costs of contract termination are limiting BWB's capacity to finance investments above pre-2013 levels.

Economic sustainability

The remunicipalised BWB has, under regulatory pressure, increased efficiency and left investments stable compared to what happened under privatisation, providing better value for money and increasing whole asset value.

Technical sustainability

Investments have remained stable at pre-remunicipalisation levels as the costs of contract termination have been passed on to consumers, tariffs have been cut and dividends are still being paid to the City.

Political sustainability

It remains to be seen whether Berlin's recognition as a "Blue City" will lead to a strengthening of democratic governance beyond declarations of intent.

Social sustainability

Remunicipalisation has induced BWB to cease the conflict with the Federal Cartel Office and to comply with its requests for a reduction in tariffs. BWB has also facilitated access to water by participating in a municipal programme for the construction of free-access water fountains.

Pragmatic remunicipalisation in Barcelona, Spain

Case study written by BCASA

Case study summary

The case of BCASA shows that the remunicipalisation of water supply is possible in Barcelona and that, depending on political will, it can lead to positive results towards the realisation of the human right to water and the enhancement of sustainable water development.

Introduction

The competences in the urban water cycle in Barcelona are managed by the Catalan Water Agency (basin organization), the metropolitan area of Barcelona and the Barcelona City Council.

Legislative Decree 3/2003, of 4 November, which approves the new text of the Catalonian water law, specifies that:
The Catalonian Government "Generalitat" exercises its powers in matters of water and hydraulic works through the Water Catalan Agency.
Drinking water production and supply through Ter-Llobregat network is a Generalitat competence. In this ambit, water supply until reservoirs is delegated to the company Aigües Ter Llobregat and water supply from reservoirs to end-users is a municipal competence.
Competences related to drinking water supply, sewerage, wastewater treatment and wastewater sanitary control correspond to local authorities.
The Barcelona Metropolitan Area (AMB, by its acronym in Spanish) is the basic water local authority that manage drinking water supply from reservoir to end-user and sanitation.

On the other hand, according to the 14th Article of the Law 31/2010 from August the 3rd, about the local entity Barcelona Metropolitan Area (AMB), its competences were:
Water supply, water management and price regulation of water charges.
Sanitation public system and wastewater treatment and regeneration.
Coordination of the sanitation municipal systems together with planning and integrated management of storm water and wastewater discharges.

The municipal competences would be the following:
Sewer Network Management
Alternative Water Resources Management (Regenerated Water, Groundwater)
Beaches. Maritime-terrestrial zone management
Ornamental and public fountains.

This context of competences from each public administration is summed in the following table:

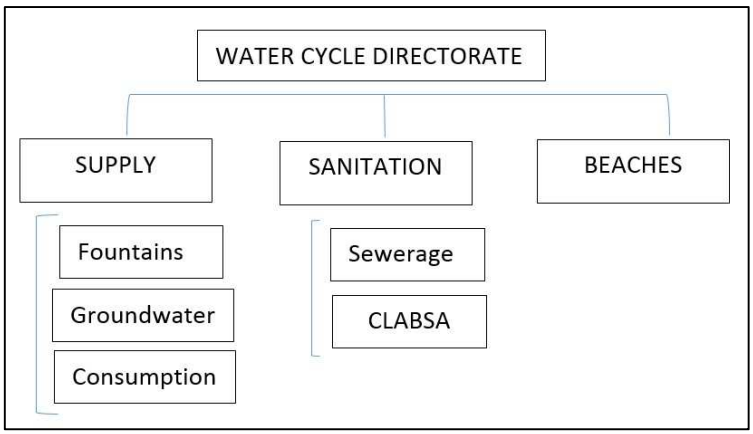
		Barcelona City Council	Barcelona Metropolitan Area (AMB)	Catalonia government (Generalitat)
DRINKING WATER	Collection	-	-	Yes
	Water purification			
	Supply until reservoir			
	Supply from reservoir to end user		Yes (until 1987 was within the municipal competence)	-
WASTE WATER	Sanitation	City sewer network	Interceptor, supra-municipal or connection to treatment plant collectors.	-
	Wastewater treatment and transmarine pipeline	-	Yes	-
	Discharges		Yes	
ALTERNATIVE WATER RESOURCES	Regenerated water	Supply	Operation	Authorizations
	Groundwater	According to the law and the sewerage regulation, this competence could be claimed by AMB if there is a change.	Yes	Authorizations
WATERFRONT	Beaches	Maritime-terrestrial zone management. Beaches in the BCN port domain area.	-	Approving use plan
FOUNTAINS	Ornamental or drinking water fountains	Yes	-	-

The city of Barcelona serves over 1.6 million inhabitants, in addition to commercial and industrial establishments located in more than 81500 properties of the municipal district, which has an area of 100.39 km^2.

The sanitation/sewerage network length of the city is over 1800 km and more than 1000 km are visitable. The network has a combined sewer typology. The volume of regulated water is about 150 Hm^3.

Nearly 310 ornamental fountains decorate the avenues, streets and parks of the city and more than 1640 drinking public fountains offer water to the pedestrian.

The groundwater network includes more than 78 km, which is distributed in 22 operating systems with an annual consumption of around 1.3 hm^3. The waterfront coastline length exceeds 4.5 km of beaches, between Sant Sebastià and Llevant.
From 2008 to 2013 the municipal water cycle management was done through the Water Cycle Department of Barcelona City Council (DSCA, by its acronym in Spanish), attached to the Environment and Urban Services Commission.
The mission of the DSCA was to manage, coordinate and optimize with quality, sustainability and participation the provision of integrated water cycle services to lead the commitments to improve the environment and fighting climate change and to improve quality of the life of citizens.
The strategic objectives of the **DSCA** were:
To boost water consumption policies
To boost the use of alternative water resources in Barcelona
To boost urban drainage improvement policies
To boost policies to improve the integral management of the coast
To boost policies to improve the city's fountains
The organizational and functional structure of the **DSCA** was as follows.



Technical and historical background

In the 1990's the city of Barcelona experienced heavy flooding during intense rain events. Because of those episodes, public administrators organised a competitive tendering in the form of a concession, which targets were: Planning and technology development, planning and network development, maintenance management and operation of sewerage facilities, technical service for real time operation and continued technical assistance to the sewerage conservation service for managing of cleaning, rehabilitation and incidences of the sewer.
This was an example of public-private collaboration of contractual partnership (where public sector has the aim of the development of a particular good or service and order a third party its production through a competitive and transparent process, and the contract is limited to a specific project.
On April 26, 1991, the Plenary Council of the Barcelona Council approved the creation of a company for the development of the sewerage system in the city of Barcelona. On March 3, 1992, the Plenary Council awarded the contract to the private companies *Aguas de Barcelona SA* (AGBAR) and *Fomento de Construcciones y contratas* (FCC). Later, in 2006, the public entity of Barcelona Metropolitan Area (AMB by its acronym in Spanish) was added as a shareholder (54% AGBAR, 20.33% FCC; 8.17% AMB; 17.5% Barcelona City Council).
Over the years, CLABSA was commissioned other services beyond those initially agreed in the tender. Thus, services developed by CLABSA were distributed as follows: 52% activities derived from the contract by Barcelona City Council, 8.6% built-in activities (management of alternative water resources

and assistance to pneumatic collection), 2.7% activities for AMB and 36.7% were contracts with other clients (Port Barcelona, Besòs river park alert system…).
This concession ended in the summer of 2007 and was extended twice: first until December 2009 and after December 2013. In this context, the concession answered the necessity to provide investment in infrastructure and technology to the service. However, the extension of the concession only guaranteed the continuity of the service.
It is important to emphasize that the City Council of Barcelona has a minority position in the shareholder composition of CLABSA, even though it is the interested party. During the initial period of the concession, the return by the City Council materialized in the construction of infrastructures and control and management of the service. However, since the first extension, the concession is solely obligated to guarantee the service, and therefore all the effort of innovation and improvement, went to the benefit of the majority shareholders. As a result, the City council reconsidered the concession terms.

During the years 2013-2014, contracts for services and the concession for sewer network management were finished. This was considered as an opportunity to unify the management of all the elements and services included in the current Water Cicle Department (DSCA). The goal was to extend the advanced management to all of services offered, through a new model that provides the following advantages:

- **Share interests and strategic objectives** in everything related to the Water Cycle, unifying criteria through the whole organization.
- **Improve the organization and distribution of resources**, eliminating duplicities, promoting actions aimed at enhancing transversality and rationality, as well as planning and executing actions with a long-term horizon.
- Concentrate all the acquired knowledge and execute tasks that provide value.
- Give visibility and enhance the Barcelona brand in the field of the Water Cycle

In this scenario, the development of a model that includes all the activities, functions, assets and personnel of the Water Cycle Division (33 workers) and of CLABSA (90 workers) was proposed. A comparison between activities of DSCA and CLABSA was carried out and a proposal was presented for the new model.

Trade unions and labour

An important work of consensus was made between the CLABSA works council, as well as the human resources department of the Barcelona City Council, in order to guarantee all the rights of the workers who decided to be part of the new public company 100% municipal Barcelona Water cycle.

Experience with privatisation

Governance

The experience of privatization, or creation of a public-private company, CLABSA, within the framework of Olympic Barcelona and major structural and urban transformations of the city, was a positive experience at the time (1990s). Once the function by which this public-private company had been created, and taking advantage of the opportunity of the completion of the concession, the Barcelona City Council decided to internalize these services of the water cycle.

Price hikes

The prices related to the sewerage rates did not represent any change when going from a mixed model to a public one, since these prices were governed by a fiscal ordinance determined by the Barcelona City Council. (http://ajuntament.barcelona.cat/hisenda/sites/default/files/ORDENAN%C3%87A%203.5.pdf)

Private profits

The public-private company CLABSA had an average annual net result of € 600,000 by year. The remunicipalisation of this company makes it possible for these benefits to be reverted to the municipal consistory.
(http://ajuntament.barcelona.cat/estrategiaifinances/ca/comptes-generals-i-informes-financers)

Remunicipalisation process

Regulatory initiatives

During the years 2013-2014, contracts for services and the concession for sewer network management were finished. This was considered as an opportunity to unify the management of all the elements and services included in the current Water Cicle Department (DSCA). The goal was to extend the advanced management to all of services offered, through a new model that provides the following advantages:

- **Share interests and strategic objectives** in everything related to the Water Cycle, unifying criteria through the whole organization.
- **Improve the organization and distribution of resources**, eliminating duplicities, promoting actions aimed at enhancing transversality and rationality, as well as planning and executing actions with a long-term horizon.
- Concentrate all the acquired knowledge and execute tasks that provide value.
- Give visibility and enhance the Barcelona brand in the field of the Water Cycle

In this scenario, the development of a model that includes all the activities, functions, assets and personnel of the Water Cycle Division (33 workers) and of CLABSA (90 workers) was proposed. A comparison between activities of DSCA and CLABSA was carried out and a proposal was presented for the new model:

		Situation until 2013	**New model developed since 2014**
Drinking water fountains	Maintenance and Cleaning	Outsources services	
	Quality control	Own resources	Own resources Technification enhancement
Sewage network	Planning	Concession contract (CLABSA)	Own resources (without changes)
	Exploitation		Own resources (without changes)
	Maintenance of facilities		Incorporation into the service provision contract
	Projects and Civil Works		Own resources.

		Situation until 2013	New model developed since 2014
			Avoidance of additional costs invoiced by contractor.
	Cleaning services	Outsources services	
	Quality control	Own resources	Own resources. Service control enhancement Resources increase
Beaches	Maintenance and Cleaning	Outsources services	
	Quality control	Own resources	Own resources. Service control enhancement Resources increase
	Support in monitoring and quality control	Own resources	Own resources. Application of Decision Support Systems
Underground water network	Planning	Concession contract (CLABSA)	Own resources (without changes)
	Exploitation		
	Maintenance		
	Projects and Civil Works		Own resources. Avoidance of additional costs invoiced by contractor.
Optical fiber	Maintenance	Concession contract (CLABSA)	Own resources. Direct invoicing with benefit for the Barcelona City Council.

Before entering into consideration of the different options proposed by the new model, it is necessary to remember that the priority of the City Council at that time was to resume the control of the service, recover internal synergies and gain capacity to make decisions and innovate to improve the service.

Additionally, the political context of the city council influenced the elected option since:

- Minority government. Thus, decision making needed other political groups support.
- Economic recession. There were uncertainties about financial capacity of private stakeholders and other public administrations.
- Divergent interests. Implicated public administrations could have their own interests.
- Legal restrictions. Budgetary laws and stability could eventually restrict staff management policies and condition the provision of services.

Therefore, analysing Barcelona City Council objectives and the then context, the pros and cons of the feasible options were:

a) A new concession tendering.

Pros	Cons	Uncertainties	Final decision
It is a well-known formula by the City Council. It guarantees financing for a private and expert knowledge	It does not respond to a real need for financing an extraordinary project. Getting capital is not the priority.	Redefine the new objectives of the new concession, duration and tracking indicators. Redefine the participation percentages of the private ones in the concession.	This option was discarded since the main objective of the City Council was to develop a model that groups all the activities, functions, assets and personnel that were currently managing directly or indirectly the activity cycle, water from the city.

b) Internalisation of the service

Pros	Cons	Uncertainties	Final decision
The City Council regains 100% control. Opportunity to take advantage of the knowledge acquired with the concession and its application to the services that are incorporated: sources, beaches, etc. Share interests and strategic objectives in the management of the water cycle.	Impossibility to incorporate personnel due to legal restrictions. Type of service that requires labor flexibility very difficult and costly to manage with civil servants. Service subject to contract law, very restrictive in terms of capacity and management autonomy in the case of a municipal service.	-	This option was discarded because of legal restrictions about incorporation of workers into the municipal staff structure.

c) To constitute a municipal entity 100% controlled by the city council.

This option could be developed through a "Local public entity" (EPEL, by its acronym in Spanish) or a Limited Company with 100% of its capital coming from the City Council.

Pros	Cons	Uncertainties	Final decision
The City Council regains 100% control. Opportunity to take advantage of the knowledge acquired with the concession and its application to the services that are	Financing restricted to own resources and the margin of manoeuvre allowed by the city council.	Model of governance to be determined. Management by objectives and self-control of organization or full control by the city council.	This was the most feasible option in the short term.

Pros	Cons	Uncertainties	Final decision
incorporated: sources, beaches, etc. Share interests and strategic objectives in the management of the water cycle. The autonomous entity formula allows a greater labour and contractual flexibility. Although this, it is still considered as a public company.		Innovation model to be determined.	

The difference between an EPEL and a Limited Company is that the Limited Company cannot carried out authority, and depends directly on the Administration. If we analyse the objectives and aims of the motivations of the change, the logical option was the creation of an EPEL, thus the City Council could delegate 100% of the management of the water cycle in this new entity. However, the selected option was the creation of a Public Limited Company because of strong restrictions in increasing public staff accordingly to existing laws.

Social mobilisation

The proposal to create a 100% public company emerged from the municipal consistory, it was not produced due to social mobilisation.

Corporate resistance

The decision not to renew a concession and to rethink the water cycle management instruments is a decision that has impact and side effects, which explain the difficulties and conditions of the project. Applying Savage's methodology (1991), we can classify the main stakeholders of the process based on their ability to contribute to the project and / or threaten it:

Potential to help the project:

- The direction of the service of the water cycle.
- Opposition parties according to this new model of water cycle management.
- Analysts, technicians and experts according to this new model of water cycle management.
- Departments of the City Council necessary to carry out the change: human resources, legal department, company management, secretary, auditor ...

Potential to threaten the project:

- The departments of the City Council necessary to carry out the change: Human resources, legal department, company management, secretary, auditor ...
- CLABSA's current shareholders who could feel that their income is threated.

- Opposition parties which disagrees with the new model of water cycle management and / or that oppose the governing party (and that they may see this project as one more issue with which to leave the government minority in evidence).
- The other administrations (Catalonian Government and Metropolitan Area administration) that can see in the project a potential threat or invasion of their competencies.
- The union representatives for the demands on labour rights that can make the change enable or inefficient.
- The workers themselves, both from the management of the service and from the CLABSA society who can see their current jobs being questioned. Resistances to change.
- The media and its ability to move public opinion to a specific position.

One of the conclusions from the stakeholder analysis is the difficulty that often involves carrying out projects that technically and financially seem more than justified, but that come with particular resistances that have high capacity to block the project.
Carrying out a process of change in these scenarios requires negotiation and search for common minimum denominators that necessarily force renunciations to the benefit of reaching consensus. Thus, in this case, the City Council had to discard the creation of an EPEL and proceed to create a Limited company.

The transaction costs of remunicipalisation

The remunicipalization of the advanced sewerage management does not subtract new costs to the municipal consistory. The opportunity to finalize the concession of the private public company CLABSA was used to carry out this remunicipalisation.

Remunicipalisation outcomes

Governance

The outcomes of the public water cycle management model with the strategic approach to achieve a sustainable and healthy city includes:

- To minimize unnecessary consumption
- To guarantee the quality of sanitation and reducing the impact on the environment
- Financially sustainable in the short, medium and long term

The outputs of the public water cycle management are:

- A well-maintained sewage network, interconnected and with zero incidents.
- A good operation of the public and ornamental fountains, with optimal water and energy consumption
- An optimization of alternative water resources, reducing the consumption of tap water for uses that are technically possible
- An excellent management of the beaches and the marine coastline

After the definition of these outcomes and outputs, a new public company was created whose social object is: The water cycle management, the execution of activities and the provision of services related to the water cycle directly or indirectly with the water cycle, the beaches, the coast and the environment.

BCASA's mission is to manage, coordinate, monitor and optimize with quality, sustainability, participation and mainstreaming the provision of integrated water cycle services:

- Sewage network
- Alternative water resources network
- Public and ornamental fountains
- Beaches management
- Other areas of the water cycle

Leading all the commitments to improve the environment and fighting climate change, to achieve a sustainable and improved quality of life for citizens.

BCASA's vision is to become an international-benchmark public company in the responsible and efficient management of water, with a commitment to Barcelona City Council's values as well as any other values it may voluntarily subscribe.

The values of BCASA are: Interest in people; sustainability: social, economic and environmental; innovation, commitment to results; integrity, ethics and transparency.

The Strategic Lines are detailed below:

- **Promote sound policies for water consumption:** ensuring rational use. Ensuring the quality of supply. Promoting the improvement and development of the entire water system. Collaborate with other administrations in the development of hydraulic plans and projects.
- **Generation of knowledge about the supply of drinking water in the city.**
- **Promote the use of alternative water resources:** Substitution of drinking water by other sources like phreatic, regenerated, grey, pluvial, etc.
- **Promote policies to improve urban drainage:** Improving and extending management of the development of the sewage system. Controlling and supervising the maintenance of the sewer network. Improving and extending the control and supervision of all conditions in the sewage system for work contracted out.
- **Promote policies to improve the integrated management of the coast:** Promoting a new beach culture for citizens and tourists. Coordinating operators. Improving the services offered.
- **Promote policies to improve the fountains:** Ensuring rational consumption and efficient operation.

Regulation and efficiency savings

The initial model of a concession responded to specific objectives and became a success. However, once the objectives that justified the concession were achieved, perpetuating the model did not add value. The decision to return to control at 100% the process could allow the City Council to internalize knowledge, maximize the performance of the built infrastructures and allow it to equip itself with an own tool to develop its objectives set for this service.

Investment

Investment in the management of the water cycle has been a priority for the Barcelona City Council. There have been no changes in relation to the situation before / after the remunicipalisation.

Employment

In the process of remunicipalization there have been no job losses, all the workers of the public-private company who have wished to continue in the company 100% public have been maintained.

Sustainability

The commitment to a sustainable, environmentally friendly and financially efficient water cycle is not an exclusive objective of the Barcelona City Council, but it is a challenge shared by all the municipalities of the world.

Financial sustainability

The remunicipalization of the public-private company CLABSA has not modified the financial sustainability of the management of the water cycle by the Barcelona City Council or its 100% public company, BCASA.

Economic sustainability

The remunicipalization of the public-private company CLABSA, as well as the creation of the 100% public company BCASA, has meant an improvement in the economic sustainability of the water cycle in Barcelona. The unification of all the services allows to manage with more flexibility, agility, simplifying processes and in a specialized way to, in short, to be able to provide a service with quality, efficiency and efficiency

Technical sustainability

Remunicipalisation, having a specialized team, with state-of-the-art technology and good control over its infrastructures, became a good starting point.

Political sustainability

The remunicipalization and unification of the water cycle in a municipal public entity allows to:

- Share interests and strategic objectives in all areas related to the Water Cycle, unifying the operation of services with common criteria throughout the organization.
- Improve the organization and distribution of resources, eliminating duplicities, favoring actions aimed at strengthening transversality and rationality, as well as planning and executing actions with a long-term horizon.
- Concentrate all the knowledge acquired and execute the jobs that add value.
- Give visibility and strengthen the Barcelona brand in the field of the Water Cycle.

Social sustainability

One of the strategic objectives of the BCASA municipal public company is the promotion of the SDGs, mainly the Goal 6: Ensure access to water and sanitation for all. Contributing to the City Council's social services to ensure the right to clean water and sanitation in our city and for all people on the planet.

BCASA has collaborated in projects to improve the management of the water cycle in other Mediterranean cities in Lebanon, Tunisia and Palestine, sharing challenges and successful experiences with municipal technicians and public water operators in these cities. Some of these projects have been carried out through the UN-Habitat-GWOPA organization and the MedCités network of cities.

Environmental sustainability

The Mediterranean cities must solve the environmental challenges derived from the vulnerability that severe droughts represent, as well as the episodes of torrential rains that cause floods. The advanced management of urban drainage makes it possible to minimize the impacts derived from CSOs (Combined Sewer Overflows) and their contaminating impact on the receiving bodies. The fact that a city can manage the integral water cycle in a public entity such as BCASA favours increasing the environmental benefits of integrated management, which takes care of all aspects that may have negative impacts on surface water bodies (rivers and coast) and underground.

Pragmatic remunicipalisation in Atlanta, USA

Case study written by Lynna Kaucheck and Emanuele Lobina

Case study summary

Remunicipalisation in Atlanta has resulted in incremental change in terms of governance. For example, in order to keep operational costs low, the new public utility has retained the employment levels achieved by the private operator (after a drastic dismissal programme). The new public utility has also imposed significant price increases to finance an ambitious investment programme – increases that have created affordability problems for low-income residents. However, the new public utility has achieved important improvements in terms of service quality relative to privatised operations.

Introduction

In the 1990s Atlanta was feeling the pressure of rising costs to maintain their 100-year-old water system. At the same time global private water corporations were making moves to take over the operation and management of publicly-owned water companies in the U.S., luring cities in with the promise of a larger debt capacity that could be used to upgrade and maintain their infrastructure,[128] while operating their systems more efficiently and at a fraction of the cost.

In November of 1998, the city of Atlanta and United Water (a subsidiary of the French conglomerate Suez Lyonnaise des Eaux) signed a 20-year lease contract for the management and operation of the city's public drinking water system.[129] United Water Services Atlanta (UWSA) took over Atlanta's drinking water system on January 1, 1999[130]. The $21.4 million per year contract was expected to save the city $20 million annually[131]. United Water was mostly likely able to afford such a low bid because they were given tax breaks for locating their regional headquarters in Atlanta's Empowerment Zone. They also agreed to hire 20 per cent of their workforce locally. These concessions saved UWSA as much as $8,000 per employee[132]. However, United Water drastically underestimated the costs to maintain the system, failed to conduct routine maintenance[133] and didn't meet the collection rate they were obligated to in their contract, costing both United Water and the city of Atlanta millions of dollars respectively[134]. In 2002, Atlanta's newly elected Mayor Shirley Franklin quickly took steps to evaluate United Water's efficacy and eventually worked to dissolve the contract with UWSA.

Technical and historical background

In 1997, a change in U.S. tax code eliminated a tax advantage for public water systems making it easier for private water companies to compete in the U.S. market[135]. Additionally, the political climate at the time favoured private sector management of a wide variety of public services[136]. Many people in local government believed that a business could better manage the business of running a city. The proof was in the pudding in Atlanta, the city had neglected their aging public water system for years, there were allegations of corruption within city government, and many city officials believed that a private water company was better suited to provide water service[137].

Like many other older cities in the U.S., Atlanta was under pressure to meet the rising costs of maintaining the city's public water system, this ultimately lead to Mayor Bill Campbell taking steps to privatize the system in 1997. Five private water companies made proposals to take on the operation and management of Atlanta's system, but the bidding process facilitated a decision that was based primarily on who could deliver the lowest cost[138]. United Water's bid came in $4 million less than the highest bidder[139]. At the time the $428 million deal between the city of Atlanta and United Water was the largest private water contract in the United States[140], and United Water toted the opportunity as a model for the future of water privatisation[141].

Experience with privatisation

Governance

United Water was hired to operate and maintain Atlanta's drinking water system. UWSA's contractual responsibilities included customer service, billing, collections, water treatment and distribution, meter installation and some repairs and improvements[142]. The city retained responsibility for paying for the insurance and power, and for monitoring the contract agreements, this was expected to cost about $6 million annually[143]. In addition, the city would remain responsible for most capital improvements[144]. Atlanta's Water Commissioner and Deputy Water Commissioner were responsible for oversight of the city's contract with United Water[145].

In September of 2001, Atlanta's Water Commissioner sent a memo to United Water's Chief Operating Officer citing violations of UWSA's contract with the city. United Water was contractually obligated to a bill collection rate of 98.5 per cent[146], to respond to leaks within 1 day and to install new meters within 15 days[147]. However, bill collection rates fell from 98 per cent under the city to 94 per cent under UWSA[148]. UWSA failed to read an adequate number of meters, estimating usage for far too many customers and as a result costing the city money[149]. Leaks often went days or weeks without being fixed and UWSA amassed a backlog of more than 13,000 service requests[150]. United Water was only installed 750 water meters annually, a rate that the city claimed they could achieve in a month[151].

Price hikes

On average, rates increased 12 per cent annually under UWSA, despite a promise from the company not to increase rates.[152]

Private profits

As is typical with privatisation deals, United Water tried to cut costs by ignoring routine maintenance and reducing the work force from over 700 employees in 1997 to just over 300 employees in 2001[153]. Just two years after taking over Atlanta's water system United Water produced documents that would have approved an $80 million pay increase for the company that were allegedly signed by Mayor Bill Campbell[154]. Campbell denied ever signing the documents and United Water eventually dropped the claim[155]. United Water was later accused of billing the city for work that they had not completed or didn't do[156] and for using Atlanta staff to work on other contracts[157]. Ultimately, Atlanta's water system wasn't a profitable venture for United Water, but since it was their first large contract in the United States they seemed willing to take a loss in order to get their foot in the door.

Remunicipalisation process

The decision to remunicipalise

The decision to remunicipalise in Atlanta was both a pragmatic and political decision, and one that came rather quickly. United Water failed to deliver on its promises almost from the beginning, by neither running Atlanta's water system more efficiently or more cheaply. UWSA failed to save the city the $20 million annually that it had promised UWSA focused on maintenance issues at the cost of customer service and the cost savings that were passed on to the city came mainly from retirement savings and not improvements in efficiency[158].

When Mayor Shirley Franklin took office in 2002 she put together a committee to evaluate whether United Water was meeting its contractual obligations. The committee created an exhaustive report, citing poor service, and a decrease in bill collections. As a result United Water was given a 90-day

period beginning August 12, 2002 to improve their service with the threat of ending their contract if obligations weren't met[159].

On March 4, 2003 Atlanta city council members passed a resolution approving the Mutual Dissolution Agreement between United Water and the city of Atlanta[160]. UWSA would operate the system through April 28, 2003 and the city of Atlanta would begin to operate the water system the following day. The agreement states that the contract was "amicably dissolved" and that United Water was not terminated through any fault of their own. The resolution prevented city council from making any negative comments about United Water to the media or the public[161].

The transition from private to public

Atlanta created a new Water Bureau, which was housed in their Watershed Management Department to run the city's water system. They planned to keep their costs at around $40 million annually by maintaining a reduced staff, outsourcing non-core functions and increasing and expediting collection services[162].

The transition wasn't an easy one. A performance audit conducted by the city in 2004 showed the new Water Bureau's collection rate had dropped to 91.65 per cent[163] It was taking the bureau 103 days on overage to collect delinquent bills and as a result increased accounts receivable by 49 per cent[164]. Between 2003 and 2004 a minimum charge on monthly for drinking water was added to bills and a tiered billing system was implemented[165], increasing rates and reducing customer's ability to pay.

Though rates increased, service improved in Atlanta. A performance report from December of 2004 indicated that for 2003 and 2004 the city had no Safe Drinking Water Act Violations (compared to 6 in 2002), zero boil water advisories (compared to 12 in 2002), they increased monthly meter readings to 96.2 per cent (compared to 94 per cent under UWSA), and 272 per cent of priority fire hydrant repairs had been complete.[166] Additionally, several major infrastructure projects were underway.

Remunicipalisation outcomes

Governance

The new Water Bureau was lead by the Commissioner of the Watershed Management District and nine senior managers. The bureaus worked to be more efficient and improve customer service by outsourcing non-core functions, reducing overtime by scheduling night and weekend shifts, increasing job training and initiating a bonus program based on performance for all staff[167]. As with all publicly owned and operated systems in the U.S. the Water Bureau was subject to Freedom of Information Act requests increasing the level of transparency of the operations and management of the water system.

Investment

When the city took over operation of the water system in 2003, they were facing $800 million in drinking water infrastructure upgrades and an estimated $3 billion in sewer upgrades[168]. Though the city aimed to provide customers with better service, rate increases were inevitable. This situation is not unique to Atlanta, federal funding for water infrastructure in the United States has decreased 82 per cent per capita since 1977[169], meanwhile water infrastructure in cities like Atlanta have continued to age, needing costly repairs and upgrades. Without a dedicated source of federal funding for the state revolving loan funds to help cities improve their water infrastructure that cost has been passed on to ratepayers.

Employment

In developing their new business plan for the Water Bureau, Atlanta vowed to keep employment at 43 per cent below what it was in 1998[170]. This meant that jobs were not coming back to the water department. In August of 1997 the water department employed 763 people, prior to the last city early retirement option day in March of 1998 staff had decreased to 601, it was down to 529 prior to UWSA taking over the system. The goal for the new Water Bureau was just 346[171]. In sum, the Bureau employs 4 fewer employees than UWSA did.

However, the city waived the six-month probation period for former city employees in good standing[172]. This means that any former city employee that had a good employment record was able to go back to working for the city as a "permanent" employee, and did not have to go through the 6-month probationary period that new employees have to go through.

Sustainability

In the case of Atlanta, remunicipalisation has fostered sustainability in many ways, but the U.S. federal government's failure to invest in public water infrastructure has threatened financial sustainability in not just Atlanta, but water systems across the country[173].

Financial sustainability

In 1998 and 1999 the federal government handed down two consent decrees. A consent decree is an agreement (or settlement) (in this case between the Upper Chattachoochee Riverkeeper Fund, Inc.; The Chattahoochee Riverkeeper, Inc.; and W. Robert Hancock Jr. and the City of Atlanta AND The United States of America; The State of Georgia and the City of Atlanta) that resolves a disagreement without an admission of guilt. In both cases it was for combined sewage overflow events that resulted in Clean Water Act violations. The city was fined $700,000 and $2.5 million for "the largest Clean Water Act penalty ever assessed against a municipality"[174]. In turn, to meet the requirements of the consent decrees the city of Atlanta increased their long-term debt from $500 million to $3.5 billion as of 2009[175].

Since remunicipalisation the city has come into compliance with the first decree and in 2012 they received a 13-year extension on the second decree, which was originally to be met in 2014[176]. Specifically, they were required to (source: http://www.cleanwateratlanta.org/FAQ/):

Separate a minimum of 27% of the combined sewer system. Meeting this minimum will increase the City's total separated area from 85% to almost 90%. The areas to be separated will be chosen based on water quality benefits and how cost-effectively they can be implemented.
Construct a deep-rock tunnel storage and treatment system to capture and store 85% of the combined storm water and sewage flow for conveyance to two new CSO treatment facilities for advanced treatment (a much higher level than the current CSO treatment facilities provide) before discharge to the Chattahoochee or South Rivers. The number of overflows will be reduced from 60-80 per year to an average of only 4 per year at the 7 existing CSO treatment facilities. These remaining overflows will be screened, disinfected and dechlorinated before discharge to a receiving stream.
The new CSO treatment facilities will use chlorination/dechlorination, a highly effective method of killing bacteria that eliminates the need for chlorine disinfection. While chlorine is an effective method of killing bacteria, it can harm aquatic life. At the existing facilities where chlorine will still be used, dechlorination will be added so that treated discharges do not contain harmful chlorine residual.

Economic sustainability

Atlanta has some of the highest combined drinking water and sewer rates in the country[177]. The city raised rates 250 per cent over a decade in order to come into compliance with the consent decrees[178].

Additionally, in a 2004 ballot, residents approved a 1 per cent sales tax increase to fund improvements to the city's wastewater system[179]. Atlanta is taking steps to insure that their customers have access to water. Atlanta's Care and Conserve program provides support for customers to repair or replace leaking faucets and toilets and install low flow options, they also offer payment assistance and assistance to repair or replace sewer lines[180]. In 2018, the city began taking advantage of the state's "Gratuity Clause" allowing them to spend taxpayers' money to support vulnerable consumers, for example by paying delinquent water bills for those customers most in need. The city also offers a 30 per cent discount for senior citizens with a combined household income below $25,000[181].

Though the city has taken steps to improve access to water through their assistance programs, they are in desperate need of an income-based affordability plan. Food & Water Watch's research has shown that when there is a genuine inability to pay that assistance plans are not effective. Assistance plans work for people that have fallen on hard times, but that will rebound, or if someone has a leak they didn't know about and receive and abnormally high bill. But when the inability to pay is persistent (say for low income families or seniors) then an income-based affordability plan is needed.

Technical sustainability

Under public control collections have risen to 98 per cent, and the city has made huge strives to improve service and make major investments in capital improvements. As of February 2018, bill estimation is down to 1.5 per cent, backlogged work orders have been reduced by 56 per cent from the previous 15 years and the number of spills has decreased over the previous two years[182].

Environmental sustainability

Funded by water rates, Clean Water Atlanta's $4 billion initiative is a massive overhaul of the city's drinking and wastewater systems in order to provide safe, clean water. In 2017, the city adopted a Green Infrastructure Action Plan with the goal of implementing low cost green infrastructure options to reduce stormwater run-off and keep pollution from flowing to Atlanta's lakes, rivers and streams[183].

Pragmatic remunicipalisation in Budapest, Hungary

Case study written by Emanuele Lobina, András Kis, Gábor Ungvári and Vera Weghmann

Case study summary

While there has been no significant improvement in terms of technical performance following the remunicipalisation in Budapest, the new public utility has continued the practice of the private operator, i.e. of excluding any form of public participation in decision making. Following remunicipalisation, there has been a price reduction of ca. 10% that has been imposed by the national regulator. This price reduction has been made possible by the abolition of management fees and suspension of dividend payments under public ownership. However, part of the resources generated by the abolition of management fees and suspension of dividend payments are being used to pay for higher taxes, so that the amount of resources reinvested in the system has not increased significantly relative to private operations.

Introduction

Budapest was the first Central and Eastern European capital city to privatise water supply (in 1997) and the first to remunicipalise the service (in 2012).[184] Throughout this period, water service reform and regulation, in Budapest like in many other Hungarian cities, have been dictated by national politics. The 1997 privatisation of water supply in Budapest took place against the backdrop of the post-1990 national transition to a market economy and the large-scale sale of state-owned enterprises.[185] The 2012 remunicipalisation was encouraged by Viktor Orbán's Fidesz party after this seized control of the national government. Under Mr Orbán's leadership the Hungarian government has shown hostility towards foreign multinationals' pricing policies and viewed public ownership in the water sector as strategically important, factors that have contributed to the resurgence of public ownership in Hungary's water sector. The Hungarian government has also adopted regulatory decisions and levied taxes on local water utilities, with the effect of limiting the autonomy of local water governance.[186] In this context, and in the absence of strong participatory governance, water remunicipalisation in Budapest has resulted in moderate change.

Technical and historical background

Budapest has a population of ca. 1,800,000. Under the pre-1990 socialist regime, water supply was owned and managed by the state and prices were kept artificially low as a form of social welfare. In 1991, ownership was transferred to the municipal government and prices began to regularly increase in order to contribute to financing operating and capital expenditure. In 1995, the municipal government decided that it would privatise water supply in order to rationalise the service, thus echoing national arguments for water privatisation that revolved around expectations of greater private efficiency and private capacity to finance much needed investments.[187] The mid-90s represented in fact the "era of large pipe breaks" and the deteriorating infrastructure needed to be urgently overhauled.[188] The municipal government also decided to privatise water supply for fiscal reasons, as the revenues obtained from the deal would have contributed to finance the city's development plans.[189] 1995 was after all the year when Hungary appeared to be on the verge of bankruptcy, the Hungarian government introduced severe austerity measures and was looking at the revenues from privatisation as crucial to avoid bankruptcy.

As is often the case prior to privatisation,[190] the municipal operator sought to improve efficiency in order to make the operation of the service more attractive for the international private sector. Under municipal management non-revenue-water was reduced from roughly 30% to less than 20% by the time the service was privatised. The water supply operator Budapest Waterworks has failed to do

better than that in terms of leakage reduction, both under private and remunicipalised management.[191]

After an international competitive tender, in March 1997 a consortium composed of the two multinationals Lyonnaise des Eaux (now known as Suez) and RWE was selected as the private operator of Budapest Waterworks. The private consortium paid US$ 91 million to buy 25% of the shares in Budapest Waterworks and for the right to operate the water supply system for 25 years.[192] It has been suggested that the amount paid by the Suez/RWE consortium – which offered to pay extra HUF3 billion to the city council compared to a competing consortium – has been a key factor in the city council's decision to award the contract. This despite the fact that the higher amount offered by Suez/RWE would have led to a 10% price increase, in what can be described as a form of hidden taxation.[193]

Experience with privatisation

Governance

The privatised contract was a 25-year hybrid between a lease and a management contract awarded to Budapest Waterworks (Fővárosi Vizmüvek Zrt), a joint venture 25% owned by the Suez/RWE consortium and 75% owned by Budapest city council. The contract provided for the Suez/RWE consortium to have exclusive managerial rights and carry all commercial risks. The private operator would not enjoy a guaranteed level of profitability and would be remunerated according to an incentive-based performance remuneration scheme. More precisely, the formula for the calculation of the private operators' management fee took into account the amount of investments made, the improvements achieved in terms of service quality, and their success in exacting debts, reducing operational costs and enhancing cost-efficiency. It ensured that the private operators would reap 75 percent of the savings. The privatised contract was renegotiated following regulatory conflicts and since 2008 the private operators would be remunerated through the payment of dividends instead of a management fee.[194] As regards transparency, the privatised contract was confidential and remained as such until a news website obtained and published the leaked text of the contract in 2012.[195] Decision making under privatisation did not involve public participation, either in the form of co-decision making (e.g. with civil society representatives sitting in the Board of Directors) or in the form of consultation.[196]

Price hikes

Although Budapest Waterworks was privatised amid expectations of price reductions thanks to increased efficiency,[197] water prices increased above inflation[198] and doubled during the 15 years of privatisation, from 1997 to 2012.[199] Initial concerns over the impact on affordability for large parts of the population[200] seem to have not materialised due to the low price levels prior to privatisation.[201]

Private profits

The Suez/RWE consortium reaped profits annually by receiving 25% of the dividends distributed to the shareholders of Budapest Waterworks and by awarding itself management fees.[202] The total amount of dividends paid to all public and private shareholders from 2008 to 2012 was HUF7.76 billion (no dividends were paid in the previous years). Dividends as a percentage of after-tax profits oscillated between 183.5% in 2008 to 47.9% in 2012.[203] As regards the payment of management fees, these could amount to HUF2 billion in a single year.[204] According to the management of Budapest Waterworks, the efficiency savings remunerated through the management fee came mainly from three areas: 1) a 30% reduction in the workforce from 1996 (therefore this process began under public ownership) and 2006; 2) reduced non-revenue-water, which oscillated between 20% and 16%; and, 3) improved bill collection.[205]

Regulatory conflicts

The formula to calculate the management fee enabled the Suez/RWE consortium to extract growing profits from the operation of the contract, even in years when Budapest Waterworks had recorded financial losses. This generated conflicts with Budapest's municipal government as this sought to assert its regulatory control over the contract. For example, in 1998 the management fee amounted to HUF2 billion against financial losses of HUF1.5 billion recorded by Budapest Waterworks. The following year, the company's losses increased and so did the management fee paid to the private consortium. At the same time, the private operator was lagging behind with the realisation of investment plans and, in June 1999, the municipal government refused to approve the business plan presented by the operator due to disagreements over the level of directors' pay. In fiscal year 2000, the management fee amounted to HUF1.69 billion against financial losses of HUF158 million.[206]

In 2000, the dispute around the formula for calculating the management fee led to contract renegotiation, but the conflicts between the city and the private operator continued. While the private operator claimed to have improved service quality and renovated the water distribution equipment, the municipal government lamented that its ability to control private operations was inadequate, the management fee was too high and the above-inflation tariff increases were excessive.[207]

Remunicipalisation process

The decision to remunicipalise

At the 2010 elections, the conservative party Fidesz won a two-thirds majority in the national parliament and seized the majority of Budapest city council. Fidesz leader Viktor Orbán encouraged water remunicipalisation as a way of re-establishing public control over a strategically important public service, mentioning the 2009 remunicipalisation in the city of Pécs.[208] After winning the local elections in Budapest, Fidesz argued that the private operator had abused its dominant position to overcharge for their services and the municipal government demanded to buy back the shares held by the private consortium.[209] The position of Budapest Waterworks, as expressed in a 2016 article written by two members of the companies' management, is more nuanced. According to this position, the main reason for remunicipalising water supply was financial: if in the initial years of privatisation the operational improvements achieved justified the payment of the management fee, by 2010 the management fee had become disproportionately high (in the 11-year period between 2000 and 2010, the aggregate value of management fees paid to the private operator was HUF 27.5 billion).[210]

The adoption of national legislation by the Orbán government facilitated the termination of the privatisatised contract and remunicipalisation of water supply in Budapest. A water utility act passed at the end of 2011 (Act CCIX of 2011) outlawed water privatisation, including the private ownership of water utility assets and private sector participation in the operation of water services. The act banned the renewal of existing privatised contracts. The government expressed its strong preference for state and municipal ownership and management of water services. The national government's stance encouraged Budapest city council to terminate its agreement with Suez and RWE. The open hostility of the government toward foreign investors in public utilities, the introduction of new taxes on public service provision and expected provisions for the reduction of water tariffs are all factors that may have influenced the private operator's decision to mutually terminate the agreement.

In 2012, Budapest's municipal government agreed to pay HUF 15.1 billion (about EUR 50 million) to the private consortium to buy their shares in Budapest Waterworks and terminate the privatised contract. Technically, the shares were purchased by Budapest Waterworks, with the help of a HUF 12 billion loan from Budapest's municipal government. The payment of management fees ended in the first quarter of 2012.

Remunicipalisation outcomes

Governance

Budapest Waterworks is a 100% publicly owned joint stock company. The shares held by the private consortium were purchased by Budapest Waterworks and were thus indirectly owned by the municipal government. This became the dominant owner of the water utility, with its direct and indirect ownership totalling 98.8%. The remaining 1.2% of the shares are divided between 12 local governments.[211] While no dividends were distributed to the public shareholders until 2017,[212] Budapest Waterworks remains commercially run and has developed a new business unit to market its know-how and experience for international projects ranging from consultancy and technical assistance to infrastructure construction and management.[213] Another element of continuity with the governance regime under privatisation was represented by the lack of public participation. Decision making did not involve public participation, either in the form of co-decision making (e.g. with civil society representatives sitting in the Board of Directors) or in the form of consultation.[214]

The political economy of remunicipalisation

It is difficult to compare the performance of Budapest Waterworks before and after remunicipalisation due to the many changes that have affected the economics of service provision under full public ownership. The following is a summary of the main changes and the way in which these may have affected the economics of remunicipalised water supply in Budapest.

1) Thanks to remunicipalisation, consumers saved an estimated HUF 33 billion (€100 million) that would have financed the payment of management fees in the 10 years to 2022 if the privatised contract had not been terminated.[215]
2) In July 2013, the national government imposed a 10% reduction in water prices charged to households. Subsequently, the government froze tariffs at the 2013 level, both for households and commercial consumers. As of 2019, prices remain at the 2013 level and Budapest Waterworks is having difficulties to meet the requirement, set by the 2011 water utility act, to achieve full cost recovery.
3) Considering the 10% price reduction, the freezing of tariffs and compounded inflation, the real term reduction in water prices for the period 2013-1018 was of 16%. This is because this period saw a cumulative increase of 6% in consumer price inflation. More precisely, the consumer price inflation was +1.7% in 2013, -0.2% in 2014, -0.1% in 2015, +0.4% in 2016, +2.4% in 2017 and +2.8% in 2018.[216]
4) The national government imposed additional taxes on all Hungarian water utilities, including a "supervisory surcharge" to finance the national water regulator (collecting aggregate annual payments of HUF2.3 billion nationwide), and a "public utility tax" based on the length of the pipeline network (collecting aggregate annual payments of HUF16 billion nationwide).[217]
5) The combined value of reductions in household bills, as a result of the reduction in and freezing of tariffs, and new taxes has been estimated at above HUF2 billion a year.[218] This has limited the ability of Budapest Waterworks to finance investment until today.
6) By February 2019, Budapest Waterworks had fully repaid the HUF 12 billion loan contracted with the municipal government. This has limited the ability of Budapest Waterworks to finance investment until today.

Investment levels

Despite the decision of Budapest's municipal government and the other public shareholders to renounce the payment of dividends and the abolition of management fees, the ability of Budapest Waterworks to finance investment until today has been limited by a number of costs and

expenditures. These include the costs of compensating for reduced bills, due to a reduction in tariffs, paying additional taxes, and purchasing the shares held by the private consortium. These limitations may explain the recorded reduction in investments following remunicipalisation. The average annual inflation-adjusted investment was HUF 7163 million for the period 2008-2011 and HUF 4794 million for the period 2012-2017, with the exclusion of the year 2013.[219]

Technical performance

Publicly available data suggests that the technical performance of Budapest Waterworks has not suffered from the reduced investment in maintenance. More precisely, the performance in terms of non-revenue water and pipe breaks before and after remunicipalisation remained virtually unvaried. Non-revenue water in the period 2009-2011 ranged between 16.5% and 16.6% whereas, after remunicipalisation, it oscillated between 16.7% and 16.1% in the period 2012-2017. From 2010 to 2017, the number of pipe breaks per kilometre of water mains varied between 0.20 and 0.17.[220]

Employment

From 2012, the number of workers employed by Budapest Waterworks started to increase again after the job cuts of the privatisation era. However, this increase was not due to the social policy of the remunicipalised utility but mainly to the effects of the 2011 water act. This required that water service providers could be allowed to operate only if they reached a minimum size. As a result, Budapest Waterworks took over the water and wastewater services of several neighbouring areas and the operation of a new wastewater treatment plant in Budapest.[221] In 2016, as the expansion of operations continued to serve a total of 2 million people, the annual average headcount reached 1770, out of which the number of full-time employees was 1746.[222]

Sustainability

In Budapest remunicipalisation has been accompanied by difficulties, mainly due to the costs of terminating the privatised contract and the payment of new taxes. However, now that termination costs have been met, there is the possibility of initiating a more sustainable course.

Financial sustainability

Having met termination costs will release more financial resources and contribute towards the self-financing of investments in maintenance.

Economic sustainability

Budapest Waterworks has reduced prices and some costs (e.g. management fees), which offers the possibility of achieving economic sustainability in the future.

Technical sustainability

Despite transitional difficulties with the financing of investments in maintenance, Budapest Waterworks has kept leakage and pipe break levels stable.

Political sustainability

As was the case with privatisation, remunicipalisation has introduced little public participation in decision making, if any at all.

Social sustainability

The 2013 reduction in and freezing of tariffs contributes to facilitating access to water supply and realising the human right to water.

Environmental sustainability

There is no guarantee that current levels of investment are environmentally sustainable if protracted in time. Now that termination costs have been met, it will be important to reprioritise resources.

Remunicipalisation in New York, USA

Case study written by Lynna Kaucheck and Emanuele Lobina

Cases study summary

The remunicipalisation of water in New York shows that new public-private partnerships like the Peer Performance Solutions marketed by Veolia in the USA, may be as controversial as more traditional forms of privatisation. In fact, while the private sector is very good at making convincing promises of innovation and efficiency, the profit maximisation imperative means that the private sector is not as good at keeping its promises.

Introduction

In 2010, faced with years of double-digit water rate increases and a forecasted $14 billion in capital improvements the New York City Water Board developed a report, *Strategy 2011-2014,* which set out a plan to increase safety, transparency and efficiency while keeping water rates as low as possible. In order to do this, they hired Veolia to evaluate their current operations.

In October of 2011 New York City signed a 1-year contract with Veolia to evaluate their water department. These Peer Performance Solution (PPS) contracts allow Veolia a foot in the door, which in the case of New York City, they used to get additional contracts and eventually take over the management of the city's 14 wastewater treatment plants. Like other privatisation schemes, Veolia reduced costs by neglecting routine maintenance and cutting the workforce at the wastewater treatment plants. After six years, and with an impending 2-year extension on Veolia's contract the local water workers union and advocacy groups organized to get Veolia out of New York City.

Technical and historical background

New York City's water department, run by the Department of Environmental Protection (DEP), serves 9-million people, 8-million of which reside in New York City. Their system, one of the largest in the world, employs roughly 6,000 workers and consists of 19 reservoirs, 295 miles of aqueducts, 6,600 miles of water mains, 7,400 miles of sewers, 965 water quality monitoring stations, 109,000 fire hydrants, 144,000 catch basins and 14 in-city wastewater treatment plants[223]. They deliver 1-billion gallons of drinking water to customers and treat 1.3-billion gallons of wastewater daily[224].

Faced with double-digit rate hikes every year from 2008 to 2011[225] the city decided to hire an outside company to evaluate their operations and to help achieve the 100 initiatives laid out in *Strategy 2011-2014*. In April of 2011 the New York City Water Board published a request for proposals in order to hire a consultant to help reduce water rates, maintain and enhance service and improve efficiency, operations and maintenance[226]. The project would be accomplished in two phases. Five proposals were received and the winning bid was given to Veolia Water North America Operating Services, LLC. On October 7, 2011 the New York City Water Board passed a resolution approving the contract with Veolia[227] all members present approved the contract, except one who abstained[228].

During Phase I of the contract Veolia was to review DEP's operations and make recommendations. Phase I was a 1-year contract, with the option to extend the contract for an additional year[229]. Compensation for Phase I, included a fixed fee and incentives, that were not to exceed $4 million[230]. A contract for Phase II was not guaranteed.

Phase II would focus on implementing the recommendations from Phase I. This was a four-year contract, with the possibility of two one-year extensions; compensation for Phase II was not to exceed $32 million[231].

The DEP rolled out this new partnership in November 2011, launching *Operation Excellence*: *The Best Always Do Better (OpX)*[232]. The goal of OpX was to achieve the 100 initiatives laid out in *Strategy 2011-2014*[233] and to "make DEP the safest, most efficient, cost-effective, and transparent water utility in the nation"[234]. Veolia hoped to save DEP $100-200 million annually, about 10 per cent of their operating budget and to make the system more sustainable[235]. The unions that represent the city's water workers were outraged about not having been consulted during the formation of OpX[236]. Additionally, workers voiced concerns about the city spending $4 million an on outside consultant[237]

Veolia secured Phase II of the contract, and in 2013 were hired to run the city's 14 wastewater treatment plants[238].

Experience with privatisation

By March of 2012, 63 of the 100 initiatives laid out in *Strategy 2011-2014* had been met and customers had saved $10 million through a new leak notification program[239]. In 2013, customers experienced the lowest proposed rate increase (for fiscal year 2014) in eight years, the proposed increase of 5.6 per cent was 28 per cent lower than what had been project for FY 2014 in 2010[240]. And by 2015 80 of the 100 initiatives laid out in *Strategy 2011-2014* had been implemented[241].

When Veolia took over management of the city's 14 wastewater treatment plants in 2013 the negative consequences of privatization began to bubble to the surface. Veolia cut the workforce at the wastewater treatment plants by 20 per cent, they neglected routine maintenance leaving the city with a large price tag when equipment broke and had to be replaced, and they sold off city assets[242].

Governance

Three DEP officials (the Commissioner, Deputy Commissioner and the Chief of Staff for Operations)[243], facilitated the OpX program and partnered with Veolia on that initiative. The New York City Water Board and DEP also allocated a full-time Program Director Manager and 6-9 "change agents" that were to be a part of a "core change team" for Phase I[244]. In addition, for Phase I Veolia brought on 2 senior program leaders, 4 senior managers and 6-20 additional team members[245] that would include Veolia staff and subcontractors from McKinsey & Company and Arcadis[246]. In total, DEP and the New York City Water Board hired 26 consultants, subcontractors and chief project managers, of which many of these positions replicated or echoed existing DEP positions[247].

Sadly, as if often the case with privatisation, when Corporate Accountability request Veolia's ongoing contract with the New York City Board of water if received nearly 400 pages of redacted information[248].

Price hikes

As previously mentioned, New York customers experienced double-digit rate hikes from FY 2008-2011. Following that, customers experienced to single-digit rates increases of 7.5 per cent in FY 2012, 7.0 per cent in FY 2013, 5.6 per cent in FY 2014[249] and a 15-year low of 2.97 per cent for FY 2016[250]. The initiatives developed in the *Strategy 2011-2014* report were aimed to keep water rates as low as possible[251] so it is fair to say that DEP had a plan to reduce rates before bringing Veolia on board.

Private profits

Veolia was paid both a fixed fee as well as a percentage of what they saved the city. From 2011 through March of 2016 the city paid Veolia $60 million[252], $24 million more than what was approved by the New York City Water Board in their contract, which stated that "in no event shall the total compensation payable under this Agreement for Phase I and Phase II, if awarded, exceed thirty-sic million dollars"[253].

Remunicipalisation process

In 2011 New York commissioned the multinational Veolia to supervise its wastewater systems. Within 5 years Veolia had been paid US$60 million to oversee New York's Department for Environmental protection (DEP).[254] The contract was similar to the contract in Pittsburgh that would allow the company half of all the money it saved the city. In June 2016 the city decided not to renew the contract with Veolia to manage its 14 wastewater plants. [255] An extension of the contract was already pending but trade unions and civil society groups successful mobilised against the renewal of the contract. The trade unions were angered as Veolia cut the sewage treatment workers by 20%; in other words, 120 workers were made redundant. The disaster in Flint, Michigan, where Veolia was paid $50000 in 2015 to test the water but failed to detect the lead contamination, fuelled the public outrage and consequently a coalition of civil society groups got organised and successfully prevented the renewal of the contract. [256]

Despite our best efforts, we have not been to corroborate the above accounts and find evidence of the outcome of remunicipalisation in New York. However, the experience with a Peer Performance Solutions scheme in Pittsburgh, Pennsylvania, USA confirms that this type of contract may be as controversial as more traditional forms of privatisation. It also shows that remunicipalising after the termination of Peer Performance Solutions may contribute to realise the human right to water and enhance sustainable water development.

Experience with privatisation in Pittsburgh, USA

In Pittsburgh, the French-based multinational Veolia was contracted to manage the publicly owned Pittsburgh Water & Sewer Authority (PWSA) from 2012 to 2015, under a Peer Performance Solutions deal where the private company would receive 40-50% of cost savings realised. The contract therefore incentivised cost-cutting as a way of maximising profitability.[257] In April 2014, under Veolia's management, the corrosion control chemical used to prevent lead contamination was switched to a cheaper alternative without the required approval from the state of Pennsylvania.[258] Veolia also significantly reduced the PWSA laboratory staff who monitored water quality as part of the initiatives contractually agreed and for which Veolia were remunerated.[259] As a result, Pittsburgh is in the midst of a lead crisis,[260] while Veolia received payments for over US$ 11 million pursuant to the contract.[261]

Remunicipalisation outcomes in Pittsburgh, USA

Since the return to full public control, the PWSA has passed a number of policies to protect low-income residents' access to water and sanitation services, including an affordability program and moratorium on water service disconnections in winter months.[262] PWSA has also prioritised green infrastructure development,[263] producing efforts to enhance sustainable water development and make progress towards the realisation of the human rights to water and sanitation.

Transformative water remunicipalisation in Grenoble, France

Case study written by Emanuele Lobina and Antoine Brochet

Case study summary

Grenoble was the first case of water remunicipalisation in a French city of more than 100,000 inhabitants since the turn of the century.[264] It has resulted in increased investment, lower consumer charges and higher employment. Notably an advanced form of public participation in decision making was adopted by the new public enterprise, with a third of members of the Board of Directors being civil society representatives and the remaining two-thirds being city councillors.[265] Public participation has encouraged the introduction of social tariffs in favour of vulnerable consumers.

Introduction

Grenoble is a city in south-eastern France, with a population of some 158,000. Located in the Rhône-Alpes region, it is situated at the foot of the Alps, and enjoys good quality drinking water.[266] In Grenoble a controversial lease contract was awarded to a Suez subsidiary in 1989 and then renegotiated in 1996. The contract provided for the new public-private operator to subcontract management and other services to multinational Suez, and guaranteed the increasing remuneration of the operator even in the absence of additional operating risks. The renegotiated contract was controversial not only because the original lease had been awarded as a result of bribery, but also due to lack of transparency and excessive pricing, and was terminated in 2001.[267] Remunicipalisation of the water supply in January 2001 has fostered sustainable water development at the financial, economic, technical, environmental, political and social levels.

Technical and historical background

From the late 19th century to the 1960s, decision making on water service provision in Grenoble was dominated by the need to secure sufficient supplies to a city in continuous expansion, both in terms of population and economic activity. In this sense, decisions focused on how to tap adequate water sources and manage demand. In 1930, compulsory water metering was introduced. In 1971, the municipality of Grenoble completed the construction of three wells for the abstraction of groundwater thus ensuring the provision of a sufficient supply.[268]

In 1989, two 25-year long lease contracts (one for water supply and the other for sewerage) were awarded to a subsidiary of Lyonnaise des Eaux (now known as Suez, one of the two major water multinationals). The 1989 privatisation ended more than a century of municipal provision of water supply in Grenoble. At the time of privatisation, municipal operations were characterised by an extremely low price and good water and service quality. Despite the low water price, the publicly managed service appeared profitable and regularly contributed to the municipal budget.[269] Also, by then the construction of the three abstraction wells had almost entirely been paid for by consumers and taxpayers.[270]

Two main factors – corruption and fiscal considerations – influenced the decision of the right-wing municipal government to privatise water supply. The deal had been concluded in exchange for contributions to the mayor-to-be's electoral campaign and other gifts. In addition, in order to secure the right to access the network, the private operator agreed to pay to the municipality of Grenoble ''entry fees'' amounting to FF 262.45 million and FF 128.51 million respectively for water supply and sewerage. This economic inducement to privatisation was subsequently paid for by consumers, because the private operator recovered most of the ''entry fees'' paid to the municipality through water charges: the ''entry fee'' thus became a hidden form of taxation. The practice of paying "entry

fees" to access private water contracts was subsequently and remains prohibited under French law. Bribery and fiscal inducements therefore secured private access to a captive market in pursuit of profit maximisation detrimental to consumers and taxpayers.[271] In November 1995, a French court convicted the mayor – who was a prominent figure in national politics - and a leading Suez executive.

Experience with privatisation

The Suez subsidiary COGESE operated the water supply and sewerage lease contracts from 1990 to 1996 after municipal elections brought a Socialist-Green coalition to power and a court ruled that the lease contracts had been awarded as a result of bribery. The contracts were renegotiated and transferred to SEG, a public-private joint venture between Suez and the city council. The latter continued to operate the two contracts until 2000 when these were terminated because administrative court rulings had invalidated the 1989 decision to privatise water services.[272]

From 1990 to 1995, COGESE increased water supply and sewerage tariffs by 63% after adopting the following tactics: i) the retroactive indexation of tariffs to inflation so that the price of water per cubic metre was subject to undue increases; ii) exclusive access to some works contracts and privileged access to other works contracts – in the latter case, contrary to French law, COGESE submitted bids for works contracts on which it had been initially consulted by the city council, which discriminated against the other bidders; iii) less than transparent accounting practices that failed to report profits realised from exclusive works contracts and the provision of a number of ancillary services; and, iv) fictitious accounting methods that allowed COGESE to post ever-growing losses each year and trigger price increases to fill the company's inflated deficit. In 1995, a damning report by the regional audit body established that, over the life of the two contracts, projected tariff increases and accounting practices would result in undue costs for local consumers and taxpayers in excess of FF1 billion (excluding VAT).[273]

The city council's decision to opt for renegotiation instead of unilateral termination was motivated by concerns about the possible costs of compensation and liabilities to repay Suez for the "entry fees". In 1996, the city council decided to transform COGESE into SEG, which immediately sub-contracted water supply and sewerage to the private company SGEA for the duration of 15 years. As SGEA was a fully-owned subsidiary of Suez and Suez could exert veto power over SEG's decisions in a number of strategic areas, the renegotiated agreement left Suez in control of water services. The employees of the former COGESE were unevenly subdivided between SEG and SGEA, as 82 former COGESE employees were transferred to SGEA. SEG was, therefore, an "empty shell" and operational capabilities remained firmly under the control of Suez.[274]

The allocation of risks and rewards between the two SEG shareholders was favourable to Suez. Although water prices decreased by 7%, local taxpayers suffered a net loss due to the abolition of what had become the illegal entry fees. Also, the city council agreed to forego the payment of dividends to enable Suez to recover losses incurred by COGESE. In this regard, the presumed ''losses'' suffered by COGESE corresponded to the cost of entry fees for which they had illegally charged users and the results of fictitious accounting methods. The renegotiation brought little change to the tactics that had been adopted by COGESE, as the subcontracting of operations to SGEA further penalised the city council. In particular, SEG would have increasingly remunerated SGEA without having to face additional operating risks, and any losses suffered by SEG would be recovered by charging users. Until May 1999 SGEA sub-contracted services to Suez subsidiaries at considerably high prices - these included customer services, technical assistance and management, vehicle hiring, and information technology. All losses incurred by SEG and SGEA would have to be compensated for by the city council upon termination of the contracts.[275]

Remunicipalisation process

In 1998 and 1999, a series of administrative court rulings a) invalidated the city council's decisions to delegate services to SEG/SGEA as, contrary to French law, the new contracts were not competitively tendered; b) cancelled the tariffs imposed by SEG, which still incorporated the ''costs'' of corruption, and the statutory rules allowing SEG to invoice users; and, c) annulled the tariffs charged from 1990 to 1998 for being indexed retroactively and for compensating the "entry fees" paid to the municipality. These rulings influenced the city council's decision to remunicipalise, in an attempt to ensure the legality and continuity of service provision. Consideration was given to how to terminate the contracts with SEG, on the one hand and regain de facto control over the finances and management of water supply and sewerage services, on the other hand. The options discussed for contractual termination were three – unilateral breach of contract, request to the administrative justice to annul the contractual agreements, and amicable dispute settlement through negotiation. The city council chose the latter in order to contain the costs of compensation.[276]

The municipal government bought enough Suez shares to bring these below the threshold of 33% which enabled the multinational to exert veto power on SEG's strategic decisions, and appointed a new management team of SEG. It also acquired 100% of Suez shares in SGEA and, by January 2000, it merged the company with SEG. The total cost of the acquisition of shares in SEG and SGEA, compensation for the termination, and cancellation of the deficit accumulated by SEG and SGEA, was an estimated FF100 million. The establishment of public control over SEG meant that the management appointed by the municipal government would procure ancillary services and equipment through competitive tendering. Operational preparations for remunicipalisation included obtaining the ISO 9002 certification "Model for quality assurance in production, installation and servicing."[277]

In January 2000 the city council decided to transfer sewerage services under the responsibility of the community of municipalities of the Grenoble metropolitan region. In March 2000, the city council voted to re-municipalise water supply under a *régie à autonomie financière et personnalité morale*, one of three types of municipal enterprise recognised by French law at the time. Decision makers carried out a comparative assessment of the implications of choosing one or the other organisational forms admitted by law. French law provided for three different forms of municipal enterprise (*régie*), characterised by the degree of autonomy from the city council: *régie* directe, an in-house unit directly managed by the city council under the responsibility of the mayor; *régie à autonomie financière,* an in-house unit managed by the city council, supported by an advisory council; *régie à autonomie financière et personnalité morale*, a distinct entity from the municipality, wholly-owned by the municipality and enjoying financial autonomy and distinct legal character. This last option was preferred to the other types of régie partly because it allowed for greater management flexibility, and partly because it facilitated the prospective extension of operations over neighbouring communes.[278]

Another important reason for choosing the organisational form of *régie à autonomie financière et personnalité morale* is that this simplified the transfer of the personnel working for SEG and SGEA, which was governed by private law, into the municipal operator. More precisely, the city council perceived the establishment of a *régie à autonomie financière et personnalité morale* as the only solution to preserve the same treatment and pay conditions that all personnel enjoyed under COGESE first and SEG/SGEA later. It had been estimated that choosing the "régie à autonomie financière" presented the risk that, of the 82 workers transferred from the public-private company to the new "régie", 47 private employees would keep their acquired rights while the 35 detached personnel who had been seconded ("*personnel détaché*") from the municipal government could lose their status and suffer a reduction in wages of up to 11%. The solution of the *régie à autonomie financière et*

personnalité morale fulfilled the municipal government's determination to transfer workers from the private to the new municipal operator while preserving the same treatment and pay conditions that all personnel enjoyed under the previous employer.[279]

Remunicipalisation outcomes

Governance

The new municipal water operator, called Régie des Eaux de Grenoble (REG), started operating in January 2001. REG's financial accounts were distinct from those of the municipal government and REG, which had an obligation to balance the budget, was allowed to make payments to the municipality only for services rendered by the latter. Conversely, the municipality was forbidden from compensating REG for any deficit incurred. REG was subject to the supervision of the city council, aided by an advisory committee composed of elected representatives and nominated experts. REG's Board of Directors was composed of 12 members; eight city councillors and four qualified representatives of civil society appointed by the city council. Public participation also took the form of consultative meetings between REG's management and consumers associations taking place every two months. In addition, there is a consultative committee that represents consumers.

REG was regulated by the technical services department of the municipal government, by the French government and the regional audit body and was expected to submit a number of documents for the purposes of regulation, including an annual report containing financial accounts and a technical report on its operations, a report on the price and quality of water supplied, and the budget for the forthcoming fiscal year. This level of transparency, accountability and participation was greater than under both COGESE and SEG.[280]

Efficiency

REG proved to be efficient and effective compared to COGESE and SEG due to a number of factors. In addition to not having to pay "entry fees" and being exempt from payment of corporate and other taxes, these factors included: 1) a no-dividend, no-profit policy which enabled REG to cover its operating and capital expenditure and reinvest, on average, 35% of its annual revenues; 2) REG's systematic use of competitive tendering for contracts above FF300,000, pursuant to EU and French procurement rules, with no favourable treatment accorded to Suez subsidiaries or other bidders; 3) REG's ability to borrow at the same terms and conditions enjoyed by the municipality of Grenoble, without having to guarantee the repayment of loans contracted.[281]

REG's pricing policy consisted in regularly increasing tariffs to allow for the renewal of the water supply pipeline network, although in the three years following remunicipalisation, tariffs never increased above inflation. As of 2005, REG had realised efficiency savings of €8 million per year when comparing its prices to those that COGESE charged in 1995. Estimates of yearly efficiency savings would increase to €18 million when comparing REG tariffs from 2001 to 2005 to the prices that COGESE would have charged in the same period according to the contractually agreed projections. In addition, REG's investments in maintenance and renewal were estimated at three times the average amounts invested under the previous privatised operations.

Employment

Remunicipalisation resulted in an increased headcount of workers, in addition to the 82 workers transferred from the mixed-economy enterprise SEG to the new public operator REG at the moment of remunicipalisation, for three major factors. First, a number of operational activities, which under COGESE and SEG were carried out by employees of multinational Suez, had been internalised by REG. Second, between 2000 and 2001 French law required workers not to exceed 35 working hours per

week, so that REG had to employ 36 new personnel. Other personnel had also been employed to replace lead mains in public buildings such as schools, hospitals and restaurants. Finally, a new post had been created to promote responsible water consumption among Grenoble citizens, resulting in a 20% reduction in water consumption.[282]

Sustainability

In the case of Grenoble, remunicipalisation has fostered sustainable water development at the financial, economic, technical, environmental, political and social levels.

Financial sustainability

Remunicipalisation has reduced financial requirements relative to local consumers' ability to pay, as well as the cost of accessing investment finance, while allowing for the financing of a sustained investment programme.

Economic sustainability

REG has increased efficiency and trebled investments relative to COGESE, providing better value for money and increasing whole asset value.

Technical sustainability

Remunicipalisation has fostered sustainable water development at the technical level thanks to the implementation of an ambitious investment programme.

Environmental sustainability

REG has sensitised and persuaded consumers to reduce water consumption by 20%. By contrast, COGESE was contractually obliged to contribute financially to the city council's environmental programmes but used fictitious accounting practices to evade its responsibilities. More precisely, COGESE was bound by contract to contribute FF 500,000 per year to the municipality's efforts to protect the environment and prevent environmental risks. Instead of paying such sum directly to the municipality, COGESE opted for contributing in kind – a choice criticised by the regional audit body as the municipality lost control of such resources. Not only did the private operator contribute a slightly inferior sum than expected for the period 1989 to 1994. COGESE also contributed with actions that it should have performed at its own expenses under different contractual provisions or that it had undertaken at its own initiative, such as the participation in various exhibitions. Furthermore, COGESE commissioned feasibility studies for projects that the municipality had abandoned and failed to report in detail on the costs incurred. Other measures failed to meet expectations in terms of their environmental impact. For example, from 1989 to 1994 some FF 328,000 were spent on open visits to works and open-day events and more than FF 260,000 were spent on a fresco.[283]

Political sustainability

Remunicipalisation has fostered sustainable water development at the political level in that the strengthening of transparency, accountability and participation has resulted in the strengthening of democratic governance as well as operational efficiency and effectiveness.

Social sustainability

Remunicipalisation has fostered sustainable water development at the environmental level by contributing to social cohesion since enhanced transparency, accountability and participation have favoured the emergence of collective trust in public water operations, in contrast to the legal and political conflicts between stakeholders due to the prioritisation of profit over sustainable development objectives under privatisation.[284] In sum, the new social consensus around public water operations seems to have favoured the reproduction of a virtuous cycle of sustainable decision making and management practices.

Discussion of findings

The analysis of these prominent cases of water remunicipalisation – which implies both a comparative analysis of water remunicipalisation and privatisation, and of transformative and pragmatic remunicipalisation - reveals the following findings.

Privatisation vs. sustainable water development/human right to water

Our results provide additional evidence that privatisation is inimical to sustainable water development and the human right to water. This is so due to the rigidity of private water governance, which prioritises profit maximisation over and above economic, social and environmental considerations. This rigidity can be observed in dozens of other cases in high-income as well as low- and middle-income countries, independently of the type of privatisation and form of regulation adopted.[285]

Remunicipalisation debunks the myths of the public sector

Whether transformative or pragmatic, the experience with remunicipalisation debunks the myths of the public sector that have contributed to the diffusion of water privatisation in the last 30 years. More precisely, the evidence on the policy process and policy outcome of remunicipalisation shows that, contrary to conventional wisdom:

1. **The public sector is not necessarily corrupt.** Indeed, the evidence of remunicipalisation shows that the public sector is far more transparent, accountable and open to participatory governance than the private sector. As shown by the cases of Berlin and Budapest among others, privatisation favours the secrecy of commercial confidentiality as a way of fostering profit-maximisation.
2. **The public sector is not necessarily inefficient.** Indeed, the evidence of remunicipalisation shows that the public sector is capable of delivering quality water services at a lower cost than the private sector. This is because abandoning the profit maximisation imperative of the private sector enables to reinvest profits for the development of the service.
3. **The public sector does not lack managerial capacity.** Indeed, the evidence of remunicipalisation shows that public sector managers are capable of delivering quality water services while solving the problems inherited from privatisation. These problems may include the costs of terminating privatised contracts and the difficulties of transitioning from a fragmented private service to an integrated public service. These problems may also be compounded by new taxes or other payments imposed by national and local governments.
4. **The public sector does not lack access to finance.** Indeed, the evidence of remunicipalisation shows that the public sector is capable of accessing investment finance at a lower cost than the private sector. This is because abandoning the profit maximisation imperative of the private sector enables to enhance financial sustainability. This is done by strengthening self-financing, lowering indebtedness, and guaranteeing debt repayment with tariffs and taxation.
5. **The public sector is not unsustainable.** The conventional wisdom is that the public sector is inflexible, bureaucratic and favours environmentally unsustainable approaches to infrastructure development. If this might have been the case 40 years ago, the evidence of remunicipalisation shows that today's public sector is at the forefront of meeting the social and environmental challenges of the 21st century, such as the growing levels of water poverty that undermine the human right to water and the climate change emergency. This has increasingly led to the recognition that the public ownership, not only of water but also energy services, has to be integral to attempts to tackle climate change.[286]

Transformative remunicipalisation is possible

Water remunicipalisation offers the possibility to reverse the unsustainable trajectory of privatisation and reorient water governance towards sustainable development outcomes and the realisation of the human right to water. As shown by the cases of Paris and Grenoble, this change in institutional trajectory and the achievement of emancipatory and progressive outcomes rest on the transformative power of remunicipalisation. There are a number of transformations in governance that may take place with remunicipalisation, whereby change from private to public ownership should be seen as an enabling factor and not an end in itself. One important transformation is the change in the values that inform governance and that lead to a reinterpretation of the purpose and function of water service delivery, from one based on the extraction of commercial gain to one which sees water service provision as instrumental to the flourishing of human communities. It is this transformation that explains how remunicipalisation may represent a paradigm shift and may induce public operators to outperform their private predecessors in terms of promoting virtually all dimensions of sustainable water development.

Democratic governance makes remunicipalisation transformative

If the transformative power of remunicipalisation is underpinned by the enabling effect of public ownership, the process of achieving emancipatory and progressive outcomes may be strengthened by democratic and participatory governance. The case of Paris suggests that the transformative power of remunicipalisation is more likely to be sustained when political will is aligned to civil society's expectations of the role of public services in supporting community development. In this case, in fact, the decision to remunicipalise came from the municipal authority after extensive consultations with workers and civic organisations. It was also sanctioned by the electorate in the 2008 municipal elections and participatory mechanisms were established to facilitate the continuation of a dialogue between the municipal government, the public enterprise and civil society. The case of Grenoble shows how participatory governance under public ownership may reorient managerial decisions so that these support progress towards the realisation of the human right to water.

What makes remunicipalisation transformative is the insurgent leadership of democratic and diffuse governance, whereby leadership in promoting and taking radical initiatives to prioritise community development (both social and environmental) over market development may come from political actors such as municipal governments as well as social movements, civic organisations and citizens. By contrast, what makes remunicipalisation pragmatic is the inertia of governance mechanisms and managerial practices that survive in the passage from private to public ownership. This survival can be explained by a combination of factors, including the interests of local governments and public managers that may persist despite remunicipalisation and a lack of insurgent leadership.

Pragmatic remunicipalisation is desirable relative to privatisation

The cases of Berlin, Atlanta and Budapest show that remunicipalisation is not always transformative. When there is continuity between decision makers' approach to organising and regulating water services respectively under remunicipalisation and privatisation, pragmatic remunicipalisation may bring moderate change in governance and practice. Nonetheless, even that moderate change can lead to some progress towards the realisation of the human right to water and enhancement of sustainable water development, compared to what has been the case under privatisation. In fact, the removal of

the profit maximisation imperative associated with privatisation makes the governance of remunicipalised water more flexible when it comes to allocating resources and prioritising efforts for the achievement of developmental objectives. This flexibility offers greater opportunities for actors ranging from regulatory authorities to social movements to redirect institutional trajectories towards the achievement of sustainable development objectives.

Trade unions, workers and water remunicipalisation

Trade unions and workers are in many cases apprehensive due to the uncertainty that remunicipalisation brings (like any other change in ownership).[287] This apprehension is understandable. The evidence from our case studies shows that the nature of the relationship between trade unions and the new public owners and managers very much depends on the local context and that, as a result, working conditions may improve, worsen or remain substantially unvaried without a clearly emerging pattern. There is, however, a question left open about the role that trade unions and workers may play in the face of institutional change and uncertainty. One possibility is that trade unions may build new political and social alliances that enable them to participate in insurgent leadership and contribute to direct the institutional trajectory of remunicipalised water services towards progressive outcomes.[288] Whether this is a concrete possibility or not depends on the quality of labour relations and social dialogue in each city.

The costs of remunicipalisation are an investment for the future

The possibility of achieving emancipatory and progressive outcomes in the long term means that the short-term difficulties with transitioning from private to public ownership and the transaction costs of remunicipalisation should be relativised. In the case of Paris, the transaction costs of remunicipalisation were modest and even the transitional difficulties, albeit not insignificant, were overcome after three years of public operations. In the case of Berlin, the transaction costs of remunicipalisation were more substantial as a result of unilateral termination. Even in this case, however, the savings enjoyed by consumers thanks to a 7-year reduction in prices amounted to more than a third of these transaction costs.

Conclusions

It is possible to offer the following conclusions.

1. Better not to privatise than having to remunicipalise and face the costs of contract termination.
2. The experience with remunicipalisation debunks the myths of the public sector that have contributed to the diffusion of water privatisation in the last 30 years.
3. The transformative power of remunicipalisation offers the possibility to better achieve sustainable water development objectives.
4. The transformative power of remunicipalisation is realised when political will is supported by democratic and participatory governance to deliver insurgent leadership. Trade unions and workers can contribute to strengthening participatory governance and insurgent leadership.
5. Remunicipalisation is not always transformative as there may be continuity in the regulatory approach of decision makers under privatisation and remunicipalisation.
6. Even pragmatic remunicipalisation may lead to more sustainable outcomes relative to privatisation.
7. When planning for remunicipalisation, the possible difficulties with transitioning from private to public ownership and the transaction costs of remunicipalisation should be seen in a long-term perspective and thus seen as an investment in the future of next generations.

[1] Lobina, E. (2015) Introduction: Calling for progressive water policies. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).

[2] Kishimoto, S. and Petitjean, O. (2017) Reclaiming Public Services. How cities and citizens are turning back privatisation. Available at: http://www.world-psi.org/sites/default/files/documents/research/full_publication_reclaiming_public_services_en.pdf.

[3] Lobina E, Kishimoto S, Petitjean O (2014) Here to stay: Water remunicipalisation as a global trend. Public Services International Research Unit, Transnational Institute, Multinationals Observatory, London, Amsterdam, Paris, November 2014 (http://psiru/sites/default/files/2014-11-W-HeretoStay.pdf).

[4] Iossa, E., Saussier, S., 2018. Public Private Partnerships in Europe for building and managing public infrastructures: an economic perspective. *Annals of Public and Cooperative Economics*, 89:1, pp. 25-48; Lobina, E., Corporate Accountability International (2014). Troubled Waters: Misleading industry PR and the case for public water. Corporate Accountability International, Boston, November 2014 (http://www.psiru.org/sites/default/files/2014-11-W-TroubledWaters.pdf).

[5] Lobina, E. (2015) Introduction: Calling for progressive water policies. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).

[6] Lobina, E., 2017. Water remunicipalisation: Between pendulum swings and paradigm advocacy. In Bell, S., Allen, A., Hofmann, P., Teh, T.H. (eds.) *Urban Water Trajectories*. London: Springer, pp. 149-161 (http://gala.gre.ac.uk/14983/1/14983%20LOBINA_Water_Remunicipalisation_2017.pdf); McDonald, D.A., 2018. Remunicipalization: The future of water services?. *Geoforum*, *91*, pp. 47-56.

[7] Becker, S., Beveridge, R. and Naumann, M. (2015) Remunicipalization in German cities: contesting neo-liberalism and reimagining urban governance? *Space and Polity*, 19(1), pp. 76-90; Cumbers, A., 2013. Making space for public ownership: The re-municipalisation of public services through grassroots struggle and local state action. *Planning Theory and Practice* 14 (4). pp. 547-551; Cumbers, A. and Becker, S., 2018. Making sense of remunicipalisation: theoretical reflections on and political possibilities from Germany's Rekommumalisierung process. *Cambridge Journal of Regions, Economy and Society*.

[8] Hall, D., Lobina, E., Terhorst, P. (2013) Re-municipalisation in the early 21st century: water in France and energy in Germany, in *International Review of Applied Economics*, 27(2), pp. 193-214; Warner, M. and Hefetz, A. (2012). In-Sourcing and Outsourcing: The Dynamics of Privatization among US Municipalities 2002-2007, *Journal of the American Planning Association*, 78(3): 313-327.

[9] Bel, G. and Gradus, R., 2018. Privatisation, contracting-out and inter-municipal cooperation: new developments in local public service delivery. *Local Government Studies*, *44*(1), pp. 11-21.

[10] Lobina, E. and Hall, D. 2013. Water Privatisation and Remunicipalisation: International Lessons for Jakarta. Report by the Public Services International Research Unit prepared for submission to Central Jakarta District Court Case No. 527/ Pdt.G/2012/PN.Jkt.Pst, November (www.psiru.org/sites/default/files/2014-W-03-JAKARTANOVEMBER2013FINAL.docx); Shirley, M. M. (1999) Bureaucrats in business: The roles of privatization versus corporatization in state-owned enterprise reform, *World Development*, *27*(1): 115-13; Committee on Privatization of Water Services in the United States (2002) *Privatization of water services in the United States: an assessment of issues and experience*. Committee on Privatization of Water Services in the United States, Water Science and Technology Board, Division on Life and Earth Studies, National Research Council. Washington, DC: National Academy Press.

[11] Friedman, M. 1953. The methodology of positive economics, *Essays in Positive Economics*, Chicago: Chicago University Press; Vickers, J. (1985) Delegation and the Theory of the Firm, in *The Economic Journal*, 95: pp. 138-147.

[12] For a similar approach to the definition of privatisation, see Alston, P. (2018) and Bayliss

[13] Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188.

[14] Warner, M.E. and Aldag, A.M., 2019. Re-municipalization in the US: A pragmatic response to contracting. *Journal of Economic Policy Reform*, pp.1-14; Warner, M. E., and R. Hebdon. 2001. "Local

Government Restructuring: Privatization and Its Alternatives." Journal of Policy Analysis and Management 20 (2): 315–336.

[15] ERL-UCM and PSIRU (2003) 'Public participation and sustainability, annex C to analytical framework', WaterTime Deliverable D4, December, Research Project on 'Decision making in water systems in European cities (WATERTIME), European Commission, 5th Framework Programme, 2002–2005, Contract No. EVK4-2002-0095, available at http://www.watertime.net/Docs/WP1/AFannexes.zip.

[16] Lobina, E. (2013) Remediable institutional alignment and water service reform: Beyond rational choice, in *International Journal of Water Governance*, 1(1/2), pp. 109-132 (http://gala.gre.ac.uk/5008/1/5008%20LOBINA_Remediable_Institutional_Alignment_2013.pdf).

[17] Jørgensen, T.B. and Bozeman, B., 2002. Public Values Lost? Comparing cases on contracting out from Denmark and the United States. *Public Management Review*, *4*(1), pp.63-81; Lobina, E., Hall, D. (2014) Corporatization in the European Water Sector: Lessons for the Global South. In McDonald, D. (ed.) *Public Ambiguity: Corporatization and Public Services in the Global South*. London: Zed Press, pp. 185-206.

[18] Lobina, E., Weghmann, V. and Marwa, M. 2019. Water justice will not be televised: Moral advocacy and the struggle for transformative remunicipalisation in Jakarta. Water Alternatives 12(2): 725-748 (http://www.water-alternatives.org/index.php/alldoc/articles/vol12/v12issue3/534-a12-2-17/file).

[19] Warner, M.E. and Aldag, A.M., 2019. Re-municipalization in the US: A pragmatic response to contracting. *Journal of Economic Policy Reform*, pp.1-14; Warner, M.E. and Hefetz, A., 2012. In-sourcing and outsourcing: The dynamics of privatization among US municipalities 2002-2007. *Journal of the American Planning Association* 78: 313-327.

[20] World Commission on Environment and Development. 1987. Our Common Future. New York: Oxford University Press (http://www.un-documents.net/our-common-future.pdf).

[21] Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188; ERL-UCM and PSIRU (2003) 'Public participation and sustainability, annex C to analytical framework', WaterTime Deliverable D4, December, Research Project on 'Decision making in water systems in European cities (WATERTIME), European Commission, 5th Framework Programme, 2002–2005, Contract No. EVK4-2002-0095, available at http://www.watertime.net/Docs/WP1/AFannexes.zip; Hall, D., Lobina, E. (2005) Good Practice Recommendations, *WaterTime Deliverable D60*, November 2005. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/Docs/GPRs/complete/GPRs-final-eng.doc).

[22] Hall, D., 2004. *Public Services Work!: Information, insights and ideas for our future*. Public Services International (http://library.fes.de/pdf-files/gurn/00205.pdf).

[23] Lobina, E., Weghmann, V. and Marwa, M. 2019. Water justice will not be televised: Moral advocacy and the struggle for transformative remunicipalisation in Jakarta. Water Alternatives 12(2): 725-748 (http://www.water-alternatives.org/index.php/alldoc/articles/vol12/v12issue3/534-a12-2-17/file); Brown, C.; Neves-Silva, P. and Heller, L. 2016. The human right to water and sanitation: A new perspective for public policies. *Ciencia & Saude Coletiva* 21(3): 661-670.

[24] Amsler, S.S., 2015. *The education of radical democracy*. London and New York: Routledge.

[25] Lobina, E., 2017. Water remunicipalisation: Between pendulum swings and paradigm advocacy. In Bell, S., Allen, A., Hofmann, P., Teh, T.H. (eds.) *Urban Water Trajectories*. London: Springer, pp. 149-161 (http://gala.gre.ac.uk/14983/1/14983%20LOBINA_Water_Remunicipalisation_2017.pdf); Hall, D., Lobina, E. (2009) Water Privatization, in Arestis, P., Sawyer, M. (eds.) *Critical Essays on the Privatization Experience*, International Papers in Political Economy Series, Basingstoke and New York: Palgrave Macmillan, pp. 75-120.

[26] Lobina, E., 2017. Water remunicipalisation: Between pendulum swings and paradigm advocacy. In Bell, S., Allen, A., Hofmann, P., Teh, T.H. (eds.) *Urban Water Trajectories*. London: Springer, pp. 149-161 (http://gala.gre.ac.uk/14983/1/14983%20LOBINA_Water_Remunicipalisation_2017.pdf).

[27] Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188; Lobina, E., 2017. A better future for water: what role for theory?, in Kiddey, R. (ed) Today's Future – Challenges & Opportunities Across the Social Sciences, *ISRF Bulletin*, Issue XIII, pp. 16-21, June 2017 (https://issuu.com/isrf/docs/isrf_bulletin_issue_xiii).

[28] Pigeon M (2012) Une eau publique pour Paris: Symbolism and Success in the Heartland of Private Water. In: Pigeon M, McDonald DA, Hoedeman O, Kishimoto S (eds) Remunicipalisation: Putting Water Back into Public Hands. Transnational Institute, Amsterdam, p 24-39 (http://corporateeurope.org/sites/default/files/publications/remunicipalisation%20web%20final.pdf).

[29] Lobina, E. (2015) Introduction: Calling for progressive water policies. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).
[30] Lobina E, Kishimoto S, Petitjean O (2014) Here to stay: Water remunicipalisation as a global trend. Public Services International Research Unit, Transnational Institute, Multinationals Observatory, London, Amsterdam, Paris, November 2014 (http://psiru/sites/default/files/2014-11-W-HeretoStay.pdf).
[31] Lobina, E. (2013) Remediable institutional alignment and water service reform: Beyond rational choice, in *International Journal of Water Governance*, 1(1/2), pp. 109-132 (http://gala.gre.ac.uk/5008/1/5008%20LOBINA_Remediable_Institutional_Alignment_2013.pdf); Lobina, E. (2005) Problems with Private Water Concessions: A Review of Experiences and Analysis of Dynamics, in *International Journal of Water Resources Development*, Vol. 21, No. 1, pp. 55-87.
[32] Interview 2; Bauby and Similie (2013); Valdovinos, J., 2012. The remunicipalization of Parisian water services: new challenges for local authorities and policy implications. *Water international*, *37*(2), pp. 107-120.
[33] Bauby and Similie (2013); Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris.
[34] This was the consultancy Merlin which would be later implicated in the corruption scandal around the privatisation of water supply in Grenoble, France (see the case study on Grenoble). In 1996 Marc Michel Merlin, executive of the consultancy Merlin, received a one-year prison term for his role in the scandal. See Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[35] Interview 2.
[36] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins; Bauby and Similie (2017, 2013).
[37] Bauby and Similie (2013); Valdovinos, J., 2012. The remunicipalization of Parisian water services: new challenges for local authorities and policy implications. *Water international*, *37*(2), pp. 107-120; Barraqué, B., 2012. Return of drinking water supply in Paris to public control. *Water Policy*, *14*(6), pp. 903-914.
[38] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins.
[39] Lorrain (1991).
[40] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf).
[41] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf).
[42] Valdovinos, J., 2012. The remunicipalization of Parisian water services: new challenges for local authorities and policy implications. *Water international*, *37*(2), pp. 107-120.
[43] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf).
[44] Le Strat, A. (2018) Back to the public: Paris' water management reform.
[45] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.
[46] Le Monde (1998) Les élus demandent plus de transparence aux majors de l'eau, 17 April 1998.
[47] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris.
[48] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins, pp. 59-61.
[49] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins, pp. 59-61; Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[50] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins, pp. 59-61; Le Strat, A. (2018) Back to the public: Paris' water management reform; Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[51] Le Strat, A., 2015. *Une victoire face aux multinationals - Ma bataille pour l'eau de Paris*. Paris, Les Petits Matins, pp. 59-61; Le Strat, A. (2018) Back to the public: Paris' water management reform; Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform; Chambre Régionale des Comptes Ile de France (2014) Sur les comptes de liquidation du Centre de Recherce, d'Expertise et de Contrôle des Eaux de Paris (CRECEP) – (1er mai 2009 – 31 décembre 2011) – Rapport d'observations définitives et sa réponse, October 2014.

[52] Chambre Régionale des Comptes Ile de France (2017) La régie Eau de Paris – Enquête régionale sur l'alimentation en eau potable de la métropole du Grand Paris – Exercices 2010 et suivants – Observations définitives, July 2017; Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[53] The duration of the first service contract was of 5 years, from 2010 to 2014, while that of the second service contract was of 6 years, from 2015 to 2020. Mairie de Paris, Eau de Paris (2016) Contrat d'objectifs du service public de l'eau de Paris. 18 January 2016.

[54] Interview n+1 (13.02.2019); Interview n+2 (03.10.2019). The composition of the Board of Directors of Eau de Paris has been subject to minor variations since 2010. See Eau de Paris (2010) Rapport annuel 2010, pp. 16-17; Lobina, E., Corporate Accountability International (2014). Troubled Waters: Misleading industry PR and the case for public water. Corporate Accountability International, Boston, November 2014 (http://www.psiru.org/sites/default/files/2014-11-W-TroubledWaters.pdf); Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf).

[55] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[56] https://www.aquapublica.eu/article/members-activities/eau-de-paris-receives-un-public-service-award.

[57] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[58] Chambre Régionale des Comptes Ile de France (2017) La régie Eau de Paris – Enquête régionale sur l'alimentation en eau potable de la métropole du Grand Paris – Exercices 2010 et suivants – Observations définitives, July 2017.

[59] Gamberini, G. (2017) Eau de Paris : "Sept ans après la remunicipalisation, nous avons atteint l'âge de raison", La Tribune, 12 July 2017 (https://www.latribune.fr/entreprises-finance/industrie/energie-environnement/eau-de-paris-sept-ans-apres-la-remunicipalisation-nous-avons-atteint-l-age-de-raison-743552.html).

[60] Chambre Régionale des Comptes Ile de France (2017) La régie Eau de Paris – Enquête régionale sur l'alimentation en eau potable de la métropole du Grand Paris – Exercices 2010 et suivants – Observations définitives, July 2017.

[61] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.

[62] Chambre Régionale des Comptes Ile de France (2017) La régie Eau de Paris – Enquête régionale sur l'alimentation en eau potable de la métropole du Grand Paris – Exercices 2010 et suivants – Observations définitives, July 2017.

[63] Eau de Paris (2018) Bilan annuel de gestion de la régie, p. 53.

[64] Interview number 1.

[65] Chambre Régionale des Comptes Ile de France (2017) La régie Eau de Paris – Enquête régionale sur l'alimentation en eau potable de la métropole du Grand Paris – Exercices 2010 et suivants – Observations définitives, July 2017, p. 30.
[66] Author's calculations based on the Annual Reports of Eau de Paris for the period 2010-2017.
[67] Eau de Paris (2018) Bilan annuel de gestion de la régie, p. 53.
[68] Eau de Paris (2018) Bilan annuel de gestion de la régie. Année 2018, p. 62; Eau de Paris (2015) Bilan annuel de gestion de la régie. Année 2014, p. 87.
[69] Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188.
[70] Eau de Paris (2018) Bilan annuel de gestion de la régie. Année 2018, pp. 62-63; Eau de Paris (2015) Bilan annuel de gestion de la régie. Année 2014, pp. 30-31.
[71] Interview n+1.
[72] Interview n.
[73] Lobina, E. and Hall, D. 2013. Water Privatisation and Remunicipalisation: International Lessons for Jakarta. Report by the Public Services International Research Unit prepared for submission to Central Jakarta District Court Case No. 527/ Pdt.G/2012/PN.Jkt.Pst, November (www.psiru.org/sites/default/files/2014-W-03-JAKARTANOVEMBER2013FINAL.docx).
[74] Observatoire des services publics d'eau et d'assainissement, 2016, Panorama des services et de leur performance en 2013, p.96 (http://www.services.eaufrance.fr/docs/synthese/rapports/Rapport_SISPEA_2013_complet_DEF.pdf); Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188.
[75] Interview n+1 (13.02.2019); Interview n+2 (03.10.2019); Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Eau de Paris (2018) Bilan annuel de gestion de la régie. Année 2018, pp. 42-43; Eau de Paris (2015) Bilan annuel de gestion de la régie. Année 2014, pp. 61-62.
[76] Interview n+2 (03.10.2019); Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform; Eau de Paris (2018) Bilan annuel de gestion de la régie. Année 2018, p. 55; Eau de Paris (2015) Bilan annuel de gestion de la régie. Année 2014, p. 62.
[77] Le Strat, A. (2018) Back to the public: Paris' water management reform; Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf).
[78] Interview n+2 (03.10.2019); Eau de Paris (2018) Bilan annuel de gestion de la régie. Année 2018, pp. 56-57; Eau de Paris (2015) Bilan annuel de gestion de la régie. Année 2014, p. 65.
[79] Sinaï, A. (2013). L'eau à Paris: retour vers le public. Paris: Eau de Paris (http://www.eaudeparis.fr/uploads/tx_edpevents/LivreRemunicipalisation_01.pdf); Sinaï, A. (2014). Water in Paris - Return to Public Control. Paris: Eau de Paris ; Le Strat, A. (2018) Back to the public: Paris' water management reform.
[80] Gamberini, G. (2017) Eau de Paris : "Sept ans après la remunicipalisation, nous avons atteint l'âge de raison", La Tribune, 12 July 2017 (https://www.latribune.fr/entreprises-finance/industrie/energie-environnement/eau-de-paris-sept-ans-apres-la-remunicipalisation-nous-avons-atteint-l-age-de-raison-743552.html).
[81] Lobina, Emanuele (2017) Water remunicipalisation: Between pendulum swings and paradigm advocacy. In: Bell, S., Allen, A., Hofmann, P. and Teh, T.-H., (eds.) Urban Water Trajectories. Future City, 6. Springer International Publishing, London, UK, pp. 149-161.
[82] Fraktion Buendnis 90/Die Gruenen (2011) Berlin. Wie weiter mit dem Wasser. P.12. Available at: ..
[83] Lobina, Emanuele (2017) Water remunicipalisation: Between pendulum swings and paradigm advocacy. In: Bell, S., Allen, A., Hofmann, P. and Teh, T.-H., (eds.) Urban Water Trajectories. Future City, 6. Springer International Publishing, London, UK, pp. 149-161.
[84] Lobina, E., 2018. Commentary on the European Commission's "Study on Water Services in Selected Member States. A PSIRU Report commissioned by the European Federation of Public Service Unions, February 2018 (http://gala.gre.ac.uk/19211/7/19211%20LOBINA%20European_Commission%E2%80%99s_Study_on_Water_Services_2018.pdf).
[85] CIRIEC (January 2018) Workshop on Limitations of progressive municipalism within a neoliberal EU. Available at:

https://corporateeurope.org/sites/default/files/attachments/progressive_municipalism_within_a_neoliberal_eu_-_report_final.pdf

[86] Beveridge, R. (2012) *A Politics of Inevitability: the Privatisation of the Berlin Water Company, the Global City Discourse and Governance in 1990s Berlin.* VS Springer: Wiesbaden. P. 56.

[87] Beveridge, R. and Naumann, M. (2014) Global norms, local contestation: privatisation and de/politicisation in Berlin. *Policy & Politics*. Vol. 42, no. 2, pp. 275-291.

[88] Bauby, P.; Hecht, C. and Warm, S. (2018) Water Service Remunicipalisation: Paris & Berlin. CIRIEC. Available at: http://www.ciriec.uliege.be/wp-content/uploads/2018/10/WP2018-07.pdf

[89] Lanz K, Eitner K (2005) WaterTime case study – Berlin, Germany, WaterTime Deliverable D12, 31 January 2005. Research Project on 'Decision making in water systems in European cities' (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D12_Berlin.doc).

[90] Interview with ver.di on the 30.05.2018.

[91] Interview with ver.di on the 30.05.2018.

[92] Bauby, P.; Hecht, C. and Warm, S. (2018) Water Service Remunicipalisation: Paris & Berlin. CIRIEC. Available at: http://www.ciriec.uliege.be/wp-content/uploads/2018/10/WP2018-07.pdf

[93] Schaefer, C. and Warm, S. (2014) Berliner Wasserbetriebe (BWB) – Water and sewage company in Berlin. *Cirec*.

[94] Lobina, E., 2018. Commentary on the European Commission's "Study on Water Services in Selected Member States. A PSIRU Report commissioned by the European Federation of Public Service Unions, February 2018 (http://gala.gre.ac.uk/19211/7/19211%20LOBINA%20European_Commission%E2%80%99s_Study_on_Water_Services_2018.pdf); Lanz K, Eitner K (2005) WaterTime case study – Berlin, Germany, WaterTime Deliverable D12, 31 January 2005. Research Project on 'Decision making in water systems in European cities' (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D12_Berlin.doc).

[95] Bauby, P.; Hecht, C. and Warm, S. (2018) Water Service Remunicipalisation: Paris & Berlin. CIRIEC. Available at: http://www.ciriec.uliege.be/wp-content/uploads/2018/10/WP2018-07.pdf

[96] Bauby, P.; Hecht, C. and Warm, S. (2018) Water Service Remunicipalisation: Paris & Berlin. CIRIEC. Available at: http://www.ciriec.uliege.be/wp-content/uploads/2018/10/WP2018-07.pdf

[97] Bauby, P., Hecht, C. and Warm, S. (2018) Water Service Remunicipalisation: Paris and Berlin.

[98] Schaefer, C. and Warm, S. (2014) Berliner Wasserbetriebe (BWB) – Water and sewage company in Berlin. *Cirec*.

[99] Schwalbach, J., Schwerk, A., Smuda, D. 2011. Kosten und Nutzen der Rekommunalisierung der Berliner Wasserbetriebe. Humboldt University of Berlin, 28 March 2011 (https://berliner-wassertisch.net/assets/pdf/IHK/Gutachten-Wasserpreise-data.pdf); Schomaker, G. 2010. Kartellamt überprüft Berliner Wasserpreise, Berliner Morgenpost, 13 April 2010.

[100] Schaefer, C. and Warm, S. (2014) Berliner Wasserbetriebe (BWB) – Water and sewage company in Berlin. *Ciriec*.

[101] Lanz K, Eitner K (2005) WaterTime case study – Berlin, Germany, WaterTime Deliverable D12, 31 January 2005. Research Project on 'Decision making in water systems in European cities' (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D12_Berlin.doc).

[102] Beveridge, R. and Naumann, M. (2014) Global norms, local contestation: privatisation and de/politicisation in Berlin. *Policy & Politics*. Vol. 42, no. 2, pp. 275-291.

[103] Schaefer, C. and Warm, S. (2014) Berliner Wasserbetriebe (BWB) – Water and sewage company in Berlin. *Ciriec*.

[104] Berlin (n.d.) Volksbegehren und Volksentscheid. Available at: https://www.berlin.de/sen/inneres/buerger-und-staat/wahlen-und-abstimmungen/volksinitiative-volksbegehren-volksentscheid/volksbegehren-und-volksentscheid/artikel.24015.php

[105] Interview with a representative of the Wassertisch in Berlin 28.05.2018

[106] Beveridge, R. and Naumann, M. (2014) Global norms, local contestation: privatisation and de/politicisation in Berlin. *Policy & Politics*. Vol. 42, no. 2, pp. 275-291.

[107] Lobina, E., 2017. Water remunicipalisation: Between pendulum swings and paradigm advocacy. In Bell, S., Allen, A., Hofmann, P., Teh, T.H. (eds.) *Urban Water Trajectories*. London: Springer, pp. 149-161 (http://gala.gre.ac.uk/14983/1/14983%20LOBINA_Water_Remunicipalisation_2017.pdf).

[108] http://europeanwater.org/actions/country-city-focus/384-berliner-wassertisch-the-most-important-steps

[109] https://www.welt.de/regionales/berlin/article13918233/RWE-und-Veolia-klagen-gegen-Wasser-Gesetz.html

[110] https://www.tagesspiegel.de/berlin/rueckkauf-der-wasserbetriebe-veolia-klagt-gegen-rwe/6658246.html

[111] https://www.zfk.de/politik/recht-regulierung/artikel/klage-gegen-verkauf-von-berlin-wasser-scheitert-2012-05-31/
[112] https://www.berlin.de/sen/finanzen/vermoegen/nachrichten/artikel.30112.php
[113] http://europeanwater.org/actions/country-city-focus/384-berliner-wassertisch-the-most-important-steps
[114] Martin, M. (2015). Gestão da água volta para o Estado em 235 cidades no mundo, El País, 15 June 2015 (https://brasil.elpais.com/brasil/2015/06/05/politica/1433533748_741282.html).
[115] Lobina E, Kishimoto S, Petitjean O (2014) Here to stay: Water remunicipalisation as a global trend. Public Services International Research Unit, Transnational Institute, Multinationals Observatory, London, Amsterdam, Paris, November 2014 (http://psiru/sites/default/files/2014-11-W-HeretoStay.pdf).
[116] Lobina, Emanuele (2017) Water remunicipalisation: Between pendulum swings and paradigm advocacy. In: Bell, S., Allen, A., Hofmann, P. and Teh, T.-H., (eds.) Urban Water Trajectories. Future City, 6 . Springer International Publishing, London, UK, pp. 149-161; Lobina E, Hall D (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations. Utilities Policy 15(2): 93-109.
[117] http://europeanwater.org/actions/country-city-focus/384-berliner-wassertisch-the-most-important-steps
[118] Lobina, E. (2013) Remediable institutional alignment and water service reform: Beyond rational choice, in *International Journal of Water Governance*, 1(1/2), pp. 109-132 (http://gala.gre.ac.uk/5008/1/5008%20LOBINA_Remediable_Institutional_Alignment_2013.pdf).
[119] https://berliner-wassertisch.net/
[120] http://bluecommunityberlin.de/wofuer-steht-blue-community/
[121] Lobina, E., 2018. Commentary on the European Commission's "Study on Water Services in Selected Member States. A PSIRU Report commissioned by the European Federation of Public Service Unions, February 2018 (http://gala.gre.ac.uk/19211/7/19211%20LOBINA%20European_Commission%E2%80%99s_Study_on_Water_Services_2018.pdf); Bundeskartellamt (2012) Bundeskartellamt orders Berliner Wasserbetriebe to cut drinking water prices by a total of 254 million euros for the period 2012-2015, 5 June 2012 (http://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2012/05_06_2012_Wasser-Berlin.html?nn=3591568); Bundeskartellamt (2014) Düsseldorf Higher Regional Court confirms Bundeskartellamt decision on reduction of Berlin water prices, Bundeskartellamt news item, 24 February 2014 (http://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Meldungen%20News%20Karussell/24_02_2014_Wasser.html); Bundeskartellamt (2014) Measures to lower water prices in Berlin extended for three more years until 2018, Bundeskartellamt news item, 7 May 2014 (http://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2014/07_05_2014_BWB.html).
[122] Jungen-Kalish, W. and Paust-Lassen, P. (2014) Anforderungen an eine nachhaltige Sanierung des Wasser- und Abwassersystems in Berlin – Elemente zur Entwicklung eines Investitionsmonitorings. Stiftung Baugewerbe. P. 21.
[123] Jungen-Kalish, W. and Paust-Lassen, P. (2014) Anforderungen an eine nachhaltige Sanierung des Wasser- und Abwassersystems in Berlin – Elemente zur Entwicklung eines Investitionsmonitorings. Stiftung Baugewerbe. P. 17.
[124] Sources: Beteiligungsberichte Land Berlin 2004-2018.
[125] Source: http://www.bwb.de/de/21200.php (Accessed: 29/03/2019).
[126] Taz (8.11.2010) Die Wasser-Privatisierung im Faktencheck.
[127] Interview with Verdi on the 30.05.2018.
[128] Arnold, C.A (2009). *Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship.* William & Mary Environmental Law and Policy Review, Vol. 33, Iss. 3, Art. 4.
[129] Source: The World's Water 2002-2003: The Biennial Report On Freshwater Resource By: Peter H Gleick et al – The contract was just for drinking water, but Mayor Campbell indicated he would like to privatize the sewer system next (http://waterindustry.org/New%20Projects/atlanta-2.htm).
[130] Campos, C. (1999, January 1). Atlanta water flows to United; New Jersey firm optimistic despite employee lawsuit. *The Atlanta Journal and Constitution.*
[131] Campos, C. (1999, January 1). Atlanta water flows to United; New Jersey firm optimistic despite employee lawsuit. *The Atlanta Journal and Constitution.*
[132] http://waterindustry.org/atlanta-2.htm
[133] Del Rosario, R. K. (2001, September 13). United Water Services Atlanta Performance Issues [Letter to DeWayne Martin, COO].
[134] City of Atlanta, Office of the Mayor. (2002, June). *MAYOR SHIRLEY FRANKLIN INITIATES REVIEW OF UNITED WATER* CONTRACT [Press release]. Retrieved from City of Atlanta Online.

[135] Arnold, C.A (2009). *Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship.* William & Mary Environmental Law and Policy Review, Vol. 33, Iss. 3, Art. 4.
[136] Arnold, C.A (2009). *Water Privatization Trends in the United States: Human Rights, National Security, and Public Stewardship.* William & Mary Environmental Law and Policy Review, Vol. 33, Iss. 3, Art. 4.
[137] Bennett, D.L. and J.B. Hairston. (2003, January 19). Atlanta May Throw out Private Water Utility Operator. *Atlanta Journal and Constitution.*
[138] Bennett, D.L. and J.B. Hairston. (2003, January 19). Atlanta May Throw out Private Water Utility Operator. *Atlanta Journal and Constitution.*
[139] Bennett, D.L. and J.B. Hairston. (2003, January 19). Atlanta May Throw out Private Water Utility Operator. *Atlanta Journal and Constitution.*
[140] P. (2005). *Waves of Regret.* Public Citizen.
[141] Roberts, K. (2003, January 29). U.S. water privatization effort trips in Atlanta. *Reuters.*
[142] Ohemeng, F.L.K. and J.K. Grant. (2011, June). Has the Bubble Finally Burst? A Comparative Examination of the Failure of Privatization of Water Services Deliver in Atlanta (USA) and Hamilton (Canada). *Journal of Comparative Policy Analysis: Research and Practice*, 13:3, 287-306.
[143] Brubaker, E. (2001, April). *The Promise of Privatization*. On behalf of the Energy Probe Research Foundation. Prepared for the Walkerton Inquiry.
[144] Brubaker, E. (2001, April). *The Promise of Privatization*. On behalf of the Energy Probe Research Foundation. Prepared for the Walkerton Inquiry.
[145] P. (2003). *Water Privatization Fiascos: Broken Promises and Social Turmoil*. Public Citizen.
[146] Del Rosario, R. K. (2001, September 13). United Water Services Atlanta Performance Issues [Letter to DeWayne Martin, COO].
[147] P. (2001). *Water Privatization: A Broken Promise, Case Histories from Throughout the United States*. Public Citizen.
[148] Del Rosario, R. K. (2001, September 13). United Water Services Atlanta Performance Issues [Letter to DeWayne Martin, COO].
[149] Rubenstein, S. (2002, August 9). City blasts United Water. *Atlanta Business Chronicle,* Retrieved from https://www.bizjournals.com/atlanta/stories/2002/08/12/story1.html.
[150] Bennett, D.L. and J.B. Hairston. (2003, January 19). Atlanta May Throw out Private Water Utility Operator. *Atlanta Journal and Constitution.*
[151] Ohemeng, F.L.K. and J.K. Grant. (2011, June). Has the Bubble Finally Burst? A Comparative Examination of the Failure of Privatization of Water Services Deliver in Atlanta (USA) and Hamilton (Canada). *Journal of Comparative Policy Analysis: Research and Practice*, 13:3, 287-306.
[152] Ohemeng, F.L.K. and J.K. Grant. (2011, June). Has the Bubble Finally Burst? A Comparative Examination of the Failure of Privatization of Water Services Deliver in Atlanta (USA) and Hamilton (Canada). *Journal of Comparative Policy Analysis: Research and Practice*, 13:3, 287-306.
[153] P. (2001). *Water Privatization: A Broken Promise, Case Histories from Throughout the United States*. Public Citizen.
[154] P. (2005). *Waves of Regret.* Public Citizen.
[155] Bennett, D.L. and J.B. Hairston. (2003, January 19). Atlanta May Throw out Private Water Utility Operator. *Atlanta Journal and Constitution.*
[156] Rubenstein, S. (2002, August 9). City blasts United Water. *Atlanta Business Chronicle,* Retrieved from https://www.bizjournals.com/atlanta/stories/2002/08/12/story1.html.
[157] P. (2010, May). *United Water, Suez Environment's Poor Record in the United States.* Food & Water Watch.
[158] Ohemeng, F.L.K. and J.K. Grant. (2011, June). Has the Bubble Finally Burst? A Comparative Examination of the Failure of Privatization of Water Services Deliver in Atlanta (USA) and Hamilton (Canada). *Journal of Comparative Policy Analysis: Research and Practice*, 13:3, 287-306.
[159] Rubenstein, S. (2002, August 9). City blasts United Water. *Atlanta Business Chronicle,* Retrieved from https://www.bizjournals.com/atlanta/stories/2002/08/12/story1.html.
[160] A resolution authorizing the mayor to execute, on behalf of the city, a mutual dissolution agreement with United Water Services Unlimited Atlanta LLC, United Water Resources Inc. and Ondeo North America Inc., Pub. L. No. 03-R-0192 (2003).
[161] A resolution authorizing the mayor to execute, on behalf of the city, a mutual dissolution agreement with United Water Services Unlimited Atlanta LLC, United Water Resources Inc. and Ondeo North America Inc., Pub. L. No. 03-R-0192 (2003).
[162] Webb, M. (2003, February 3). N.O. undeterred after Atlanta cancels lucrative water contract. *New Orleans CityBusiness*.

[163] P. (2004, November). Follow-up Performance Audit: Department of Watershed Management Billing and Collection of Water and Sewer Service Charges. Office of City Internal Auditor.
[164] P. (2004, November). Follow-up Performance Audit: Department of Watershed Management Billing and Collection of Water and Sewer Service Charges. Office of City Internal Auditor.
[165] (2004, November). Follow-up Performance Audit: Department of Watershed Management Billing and Collection of Water and Sewer Service Charges. Office of City Internal Auditor.
[166] Department of Watershed Management Fourth Quarter 2004 Performance Report. (2004).
[167] Ravan, J.E. (2003, January). Bureau of Water Competitive Business Plan.
[168] Bennett, D.L. (2003, January 25). Atlanta, Water Firm Dissolve Pact after Four Contentious Years. *Atlanta Journal and Constitution.*
[169] P. (2019, February). *Water. Jobs. Justice. The Case for the Affordability, Transparency, Equity and Reliability (WATER) Act.* Food & Water Watch.
[170] Ravan, J.E. (2003, January). Bureau of Water Competitive Business Plan.
[171] Webb, M. (2003, February 3). N.O. undeterred after Atlanta cancels lucrative water contract. *New Orleans CityBusiness*.
[172] An ordinance to immediately restore permanent status to rehired former United Water Services Atlanta (UWSA) employees who had city service prior to the twenty-year operations and maintenance agreement between the city and UWSA, to waive the city of Atlanta code of ordinances, Section 114-326 and section 114-327 for this instance only; and for other purposes, Pub. L. No. 03-O-0955 (2003).
[173] P. (2019, February). *Water. Jobs. Justice. The Case for the Affordability, Transparency, Equity and Reliability (WATER) Act.* Food & Water Watch.
[174] Hairston, J.B. (Date ???). Atlanta Can't Get Wastewater Together. *The Atlanta Journal-Constitution*. http://waterindustry.org/New%20Projects/atlanta-7-30.htm
[175] P. (2018, June 5). City of Atlanta Water Affordability Programs.
[176] P. (2018, June 5). City of Atlanta Water Affordability Programs.
[177] Berahzer, S.I., J. Hughes and E. Riggs. (2017, July 10). *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities.*
[178] P. (2018, June 5). City of Atlanta Water Affordability Programs.
[179] Vock, D.C. (2014, December 4). Utilities Worry Water's Becoming Unaffordable. *Governing,* Retrieved from http://www.governing.com/topics/transportation-infrastructure/gov-water-utilities-worry-about-high-costs-for-low-income-customers.html.
[180] http://www.southeastenergy.org/programs/
[181] P. (2018, June 5). City of Atlanta Water Affordability Programs.
[182] Atlanta City Council, City Utilities Committee. Department Quarterly Report, City of Atlanta Department of Watershed Management. (2008, February 27).
[183] http://uswateralliance.org/content/atlanta-department-watershed-management
[184] Lobina, E. (2001) Water privatisation and restructuring in Central and Eastern Europe, 2001. *PSIRU Reports*, November 2001 (https://www.psiru.org/sites/default/files/2001-11-W-CEE.doc); Kishimoto, S., Lobina, E., Petitjean, O. (eds.) (2015) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions, pp. 18-29 (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).
[185] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.
[186] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65; Getzner, M., Köhler, B., Krisch, A., Plank, L. (2018) Comparison of European water supply and sanitation systems – Final report (abridged version). A Technical University of Vienna report commissioned by the Vienna Chamber of Labour and the Austrian Association of Cities and Towns. Vienna: Vienna Chamber of Labour (https://emedien.arbeiterkammer.at/viewer/file?pi=AC15249737&file=AC15249737.pdf).
[187] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202; Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.
[188] Source: https://hvg.hu/gazdasag/20120327_fovarosi_vizmuvek_mmennyi_a_40_mrdban.
[189] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202; Bencze,

T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.

[190] Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188.

[191] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.

[192] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65; Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[193] Hall, D. (1998) Restructuring and privatization in the public utilities—Europe, in: L. de Luca (Ed.) Labour and Social Dimensions of Privatization and Restructuring (Public Utilities: Water, Gas and Electricity), pp. 109–151 (Geneva: International Labour Office).

[194] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65; Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[195] Source: https://index.hu/belfold/budapest/2012/04/25/megszereztuk_a_titkos_vizmuvek-szerzodest.

[196] To arrive at this conclusion, we have extensively searched the Annual Reports of Budapest Waterworks, its website and conducted online searches. We found no evidence of public participation in decision making.

[197] Lobina, E., Hall, D. (2000) Public Sector Alternatives to Water Supply and Sewerage Privatization: Case Studies, in *International Journal of Water Resources Development*, Vol. 16, No. 1, pp. 35-55.

[198] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[199] Getzner, M., Köhler, B., Krisch, A., Plank, L. (2018) Comparison of European water supply and sanitation systems – Final report (abridged version). A Technical University of Vienna report commissioned by the Vienna Chamber of Labour and the Austrian Association of Cities and Towns. Vienna: Vienna Chamber of Labour (https://emedien.arbeiterkammer.at/viewer/file?pi=AC15249737&file=AC15249737.pdf).

[200] Lobina, E., Hall, D. (2000) Public Sector Alternatives to Water Supply and Sewerage Privatization: Case Studies, in *International Journal of Water Resources Development*, Vol. 16, No. 1, pp. 35-55.

[201] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[202] Source: https://index.hu/belfold/budapest/2012/04/25/megszereztuk_a_titkos_vizmuvek-szerzodest.

[203] Source: Authors' calculations based on the Annual Reports of Budapest Waterworks (in Hungarian), 2009 to 2017.

[204] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[205] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.

[206] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202; Lobina, E. (2001) Water privatisation and restructuring in Central and Eastern Europe, 2001. *PSIRU Reports*, November 2001 (https://www.psiru.org/sites/default/files/2001-11-W-CEE.doc).

[207] Boda, Z., Scheiring, G., Lobina, E., Hall, D. (2008) Hungary, in Prasad, N. (ed.) *Social Policies and Private Sector Participation in Water Supply - Beyond Regulation*. New York: Palgrave Macmillan, pp. 178-202.

[208] Risks and Forecast (27 Oct 2010) Budapest's New Mayor May Expand Public Control over City Utilities. Available at: http://www.riskandforecast.com/post/services/budapest-s-new-mayor-may-expand-public-control-over-city-utilities_599.html

[209] https://www.ft.com/content/1900a94c-0d5a-36e3-b96d-e2f805e16223

[210] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Buidapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.

[211] Source: https://www.vizmuvek.hu/en/company_information/ownership_structure.
[212] Source: Annual Reports of Budapest Waterworks (in Hungarian), 2009 to 2017.
[213] Source: https://www.vizmuvek.hu/en/our_global_solutions/our_products_and_services#red; https://www.vizmuvek.hu/en/our_international_references.
[214] To arrive at this conclusion, we have extensively searched the Annual Reports of Budapest Waterworks, its website and conducted online searches. We found no evidence of public participation in decision making.
[215] Origo (2012) 15 milliárd forintot fizet a főváros a vízművekért, *Origo*, 17 April 2012 (https://www.origo.hu/itthon/20120417-15-milliard-forintot-fizet-tarlos-a-fovarosi-vizmuvekert.html); Getzner, M., Köhler, B., Krisch, A., Plank, L. (2018) Comparison of European water supply and sanitation systems – Final report (abridged version). A Technical University of Vienna report commissioned by the Vienna Chamber of Labour and the Austrian Association of Cities and Towns. Vienna: Vienna Chamber of Labour (https://emedien.arbeiterkammer.at/viewer/file?pi=AC15249737&file=AC15249737.pdf).
[216] Source: Hungarian statistical office, Consumer Price Index, 1960-2018 (https://www.ksh.hu/docs/hun/xstadat/xstadat_hosszu/h_qsf001.html).
[217] Source: Hungarian Water Utility Association, 2016 data of the Hungarian water utility sector.
[218] Zsidai, P. (2013) Hogyan fekteti meg a fővárosi közműcégeket a rezsicsökkentés? - Buzogjanak a ceyloni források!, *Magyar Narancs* (https://magyarnarancs.hu/belpol/buzogjanak-a-ceyloni-forrasok-87085#).
[219] Source: Authors' calculations based on the Annual Reports of Budapest Waterworks (in Hungarian), 2009 to 2017. The year 2013 is excluded from the calculations as the Annual Reports do not provide data for this year.
[220] Source: Annual Reports of Budapest Waterworks (in Hungarian), 2009 to 2017.
[221] Bencze, T., Mindak, E. (2016) Experiences of Budapest Waterworks with state, municipal ownership structures and with the involvement of private funding: case study of Budapest Waterworks, Water Practice & Technology, Vol 11, No 1, pp. 58-65.
[222] Source: Annual Reports of Budapest Waterworks (in English), 2016 (https://www.vizmuvek.hu/files/public/Fovarosi_vizmuvek/tarsasagi_informaciok/bw_annual_report_2016.pdf).
[223] (2012, March 15). *DEP Releases 2011 Progress Report On Ambitious and Forward-Thinking Strategic Plan*. Press release. Retrieved from nyc.gov
[224] P. (2012). *2012 Progress Report on Strategy 2011-2014*. http://home2.nyc.gov/html/dep/pdf/strategic_plan/dep_strategy_2012_update.pdf
[225]Chavkin, S. (2011, Nov. 22). City hires water management company to steer deep spending cuts. *New York World.* Retrieved from: http://www.thenewyorkworld.com
[226] P. The New York City Water Board. (2011, April 14). Request for Proposals for Consultant on Operational Efficiencies.
[227] (2011, October 7). Resolution of New York City Water Board.
[228] Minutes of Meeting of the New York City Water Board on October 7, 2011.
[229] (2011, October 7). Resolution of New York City Water Board.
[230] (2011, October 7). Resolution of New York City Water Board.
[231] (2011, October 7). Resolution of New York City Water Board.
[232] P. Weekly Pipeline. (2011, Nov. 7). *Weekly Pipeline*. Volume 11. Issue 97.
[233] P. Weekly Pipeline. (2011, Nov. 7). *Weekly Pipeline*. Volume 11. Issue 97.
[234] Veolia and DEP. (2011, Nov. 7). *DEP Launches Program to Improve Services, Lower Costs and Maintain Status as Nation's Best Water Utility for Future Generations*. Press Release. Retrieved from: http://www.nyc.gov/html/dep/html/press_releases
[235] Veolia and DEP. (2011, Nov. 7). *DEP Launches Program to Improve Services, Lower Costs and Maintain Status as Nation's Best Water Utility for Future Generations*. Press Release. Retrieved from: http://www.nyc.gov/html/dep/html/press_releases
[236] Chavkin, S. (2011, Nov. 22). City hires water management company to steer deep spending cuts. *New York World.* Retrieved from: http://www.thenewyorkworld.com
[237] Chavkin, S. (2011, Nov. 22). City hires water management company to steer deep spending cuts. *New York World.* Retrieved from: http://www.thenewyorkworld.com
[238] P. (2018, Feb. 7). How Privatizing Water Systems Costs Taxpayers - & Endangers Them, *Heavy*. https://heavy.com/news/2018/02/risks-costs-private-water-lead-poison/
[239] New York Department of Environmental Protection. (2012, March 15). *DEP Releases 2011 Progress Report On Ambitious and Forward-Thinking Strategic Plan*. Press Release. Retrieved from nyc.gov
[240] P. NYC Environmental Protection. (2013, April 5). FY 2014 Water Rate Proposal to the New York City Water Board.

[241] News provided by Veolia. (2015, June 25). Operational Excellence Program with New York City Produces $98 Million in Annually Recurring Financial Benefits; Helps Stabilize Rates for Nine Million New Yorkers. Cision PR Newswire. Retrieved at: www.prnewsire.com
[242] Williams, D.S. (2016, March 18). The union wants to send a French multinational water management profiteer back to Paris. DC 37 (AFSCME, AFL-CIO). Blog. https://dc37blog.wordpress.com/2016/03/18/the-union-wants-to-send-a-french-multinational-water-management-profiteer-back-to-paris/
[243] P. Weekly Pipeline. (2011, Nov. 7). *Weekly Pipeline*. Volume 11. Issue 97.
[244] (2011, Nov. 1). Agreement for Services of Operational Efficiencies Consultant. Contract between Veolia Water North America Operating Services, LLC and the New York City Water Board.
[245] (2011, Nov. 1). Agreement for Services of Operational Efficiencies Consultant. Contract between Veolia Water North America Operating Services, LLC and the New York City Water Board.
[246] Veolia and DEP. (2011, Nov. 7). *DEP Launches Program to Improve Services, Lower Costs and Maintain Status as Nation's Best Water Utility for Future Generations*. Press Release. Retrieved from: http://www.nyc.gov/html/dep/html/press_releases
[247] Williams, D.S. (2016, March 18). The union wants to send a French multinational water management profiteer back to Paris. DC 37 (AFSCME, AFL-CIO). Blog. https://dc37blog.wordpress.com/2016/03/18/the-union-wants-to-send-a-french-multinational-water-management-profiteer-back-to-paris/
[248] P. Corporate Accountability. (2014, November). *Troubled Waters: Misleading industry PR and the case for public Water*. Page 40.
[249]P. (2012). *2012 Progress Report on Strategy 2011-2014*. http://home2.nyc.gov/html/dep/pdf/strategic_plan/dep_strategy_2012_update.pdf
[250] News provided by Veolia. (2015, June 25). Operational Excellence Program with New York City Produces $98 Million in Annually Recurring Financial Benefits; Helps Stabilize Rates for Nine Million New Yorkers. Cision PR Newswire. Retrieved at: www.prnewsire.com
[251] P. (2012). *2012 Progress Report on Strategy 2011-2014*. http://home2.nyc.gov/html/dep/pdf/strategic_plan/dep_strategy_2012_update.pdf
[252] Williams, D.S. (2016, March 18). The union wants to send a French multinational water management profiteer back to Paris. DC 37 (AFSCME, AFL-CIO). Blog. https://dc37blog.wordpress.com/2016/03/18/the-union-wants-to-send-a-french-multinational-water-management-profiteer-back-to-paris/
[253] (2011, Nov. 1). Agreement for Services of Operational Efficiencies Consultant. Contract between Veolia Water North America Operating Services, LLC and the New York City Water Board.

[254] https://dc37blog.wordpress.com/2016/03/18/the-union-wants-to-send-a-french-multinational-water-management-profiteer-back-to-paris/
[255] https://dc37blog.wordpress.com/2017/01/10/a-review-of-2016-part-2-a-year-of-key-victories-for-dc-37-members/
[256] https://dc37blog.wordpress.com/2016/03/18/the-union-wants-to-send-a-french-multinational-water-manhttps://www.corporateaccountability.org/blog/victory-people-power-ends-veolias-major-water-privatization-strategy/agement-profiteer-back-to-paris/
[257] Michael E. Lamb et al., "Performance Audit: Pittsburgh Water and Sewer Authority" (Pittsburgh, Pennsylvania: Office of City Controller, June 2017), 10–15 (http://apps.pittsburghpa.gov/co/Pittsburgh_Water_and_Sewer_Authority_June_2017.pdf).
[258] "Violations of the Pennsylvania Safe Drinking Water Act and Regulations: Administrative Order" (Commonwealth of Pennsylvania, Department of Environmental Protection, April 25, 2016), 2–3, http://apps.pittsburghpa.gov/pwsa/PWSA_(Admin_Order)__April_25_2016.pdf; "Actions Related to Pittsburgh Water and Sewer Authority" (Pennsylvania Department of Environmental Protection, April 25, 2016), 7, http://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/PWSA/DEP%20Cites%20PWSA%20Webinar%2004252016%201200.p df.
[259] Michael E. Lamb et al., "Performance Audit: Pittsburgh Water and Sewer Authority" (Pittsburgh, Pennsylvania: Office of City Controller, June 2017), 13 (http://apps.pittsburghpa.gov/co/Pittsburgh_Water_and_Sewer_Authority_June_2017.pdf).
[260] "PWSA 2016 Lead Test Results," Pittsburgh Water & Sewer Authority, July 22, 2016, http://www.pgh2o.com/release?id=6278; "PWSA Releases June 2019 Lead Compliance Test Results," Pittsburgh Water & Sewer Authority, July 26, 2019, http://lead.pgh2o.com/pwsa-releases-june-2019- lead-compliance-test-results/.
[261] Michael E. Lamb et al., "Performance Audit: Pittsburgh Water and Sewer Authority" (Pittsburgh, Pennsylvania: Office of City Controller, June 2017), 11 (http://apps.pittsburghpa.gov/co/Pittsburgh_Water_and_Sewer_Authority_June_2017.pdf).

[262] "Customer Assistance Programs," Pittsburgh Water & Sewer Authority, accessed September 11, 2019, http://www.pgh2o.com/cap; "The Pittsburgh Water and Sewer Authority's Bill Discount Program Launches in 2018," Pittsburgh Water & Sewer Authority, January 12, 2018, http://pgh2o.com/release?id=7659; Kathleen J. Davis, "PWSA Approves Shutoff Moratorium, Plans Policy To Assist Low-Income Residents," 90.5 WESA, October 26, 2017, https://www.wesa.fm/post/pwsa-approves-shutoff-moratorium-plans-policy-assist-low-income-residents.

[263] http://www.pgh2o.com/gi-what-we-are-doing.

[264] Kishimoto, S., Lobina, E., Petitjean, O. (eds.) (2015) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions, pp. 18-29 (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).

[265] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[266] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[267] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109.

[268] Juuti, P. and Katko, T., (Eds.) 2005. *Water, time and European Cities: history matters for the futures*. Watertime project report. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/Docs/WP3/WTEC.pdf).

[269] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[270] Juuti, P. and Katko, T., (Eds.) 2005. *Water, time and European Cities: history matters for the futures*. Watertime project report. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/Docs/WP3/WTEC.pdf).

[271] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[272] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[273] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[274] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).

[275] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in

water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[276] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[277] Lobina, E., Hall, D. (2007) Experience with private sector participation in Grenoble, France and lessons on strengthening public water operations, in *Utilities Policy*, 15, pp. 93-109. Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[278] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[279] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[280] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[281] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[282] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[283] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[284] Lobina, E. (2006) D21: WaterTime case study - Grenoble, France, *Deliverable* D21, 10 March 2006. Research Project on "Decision making in water systems in European cities" (WATERTIME), European Commission, 5th Framework Programme, 2002-2005. Contract No. EVK4-2002-0095 (http://www.watertime.net/docs/WP2/D21_Grenoble.doc).
[285] Lobina, E. (2005) Problems with Private Water Concessions: A Review of Experiences and Analysis of Dynamics, in *International Journal of Water Resources Development*, 21(1): 55-87; Lobina, E. (2013) Remediable institutional alignment and water service reform: Beyond rational choice, in *International Journal of Water Governance*, 1(1/2), pp. 109-132 (http://gala.gre.ac.uk/5008/1/5008%20LOBINA_Remediable_Institutional_Alignment_2013.pdf); Lobina, E. 2015. *A comparative institutional analysis of public and private operations in the urban water sector*, thesis submitted in partial fulfilment of the requirements of the University of Greenwich for the degree of Doctor of Philosophy by Published Work, University of Greenwich, August 2015; Lobina, E. (2019) UK - Strong and weak lock-in of water governance outcomes in England. In Porcher, S., Saussier, S. (Eds): Facing the Challenges of Water Governance. Palgrave Studies in Water Governance: Policy and Practice. Basingstoke and New York: Palgrave Macmillan, pp. 155-188.
[286] As regards the energy sector, see for example the calls made by Trade Unions for Energy Democracy (TUED): http://unionsforenergydemocracy.org/tuc-resolution-on-public-ownership-of-energy-and-climate-change/.
[287] Jakob, C., Sanchez, P., (2015) Remunicipalisation and workers: Building new alliances. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).

[288] Jakob, C., Sanchez, P., (2015) Remunicipalisation and workers: Building new alliances. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf);
Lobina, E. (2015) Introduction: Calling for progressive water policies. In: Kishimoto, S., Lobina, E., Petitjean, O. (eds.) *Our public water future: The global experience with remunicipalisation*. Amsterdam, London, Paris, Cape Town and Brussels: Transnational Institute, Public Services International Research Unit, Multinationals Observatory, Municipal Services Project and the European Federation of Public Service Unions (http://www.psiru.org/sites/default/files/2015-04-W-OurPublicWaterFutureFINAL.pdf).